

*Riverius Reformatus.*  
OR THE  
Modern *RIVERIUS*;  
Containing the  
**Modern Practice**  
OF  
**PHYSICK.**

Set down in a Method very near the same with that of *RIVERIUS*, but accommodated to the most received Principles amongst the most Modern Philosophers, as well as Physicians; with Practical Observations annex'd to each Head or Chapter.

Unto the whole are added,  
A Treatise of Venereal Diseases, and the SECRETS of the Famous *LAZARUS RIVERIUS*, never Publish'd before.

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*Translated from the Third Edition in Latin.*

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By a Doctor of PHYSICK.

---

L O N D O N,

Printed for *R. Wellington*, at the Dolphin and Crown, the West End of *St. Paul's Church-Yard*. 1706.



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# THE PREFACE.

**T**HE first Edition of the following System of the Practice of Physick, being taken from a Latin Manuscript brought to Geneva, during the Heat of the late Persecution of the Protestants in France, by a Gentleman who had been forced to leave the University of Mompelier (where he Studied Physick for a considerable time) upon a Religious Account, did meet with so general Reception among the Learned Physicians, that the first Impression (published at Geneva) being soon disposed of, another was not only Printed at Lyons in France, but a third also at Geneva: However, the Author of the first Edition, being in the Judgment of the most able Physicians, thought too concise in respect of several Matters relating to the Cure of Diseases, an Eminent Physician in those Parts undertook the Task to supply this Defect, by Compleating and Illustrating the whole with Practical Observations, appropriated and annex'd to each Chapter or Head, all the rest relating to the Nature and true Causes of all the Distempers which afflict our Humane Bodies, being sufficiently deduced by the Author before.

To render the whole the more perfect, and make it appear in the World as a Compleat Practical System of Physick, it was thought requisite to add a short Treatise of the Venereal Diseases, founded upon the Modern and most received Rules, Methods

## The Preface.

*and Practice of the most noted Physicians now in France, which was accomplish'd in the last Edition, Printed at Geneva, with an Appendix annex'd to it; containing a true and exact Description of all the secret Preparations and Remedies of that great and Famous Physician, Lazarus Riverius, which being kept very private by himself, and some of his intimate Friends, were never made publick hitherto. This great Man, who deservedly had gained the Title of the Æsculapius of France, whose Works have gained so Universal Applause and Esteem in the Learned World, and are so frequently commended and cited by the best Physicians, by reason of his vast Learning and Experience, his extraordinary Method and Integrity, having nevertheless in his Practice addit'd himself too much to the Obscure way of the Ancient Philosophy, the Author of the following Treatise judg'd he might perform an acceptable piece of Service to the Publick, if without deviating from the Method observed by Riverius, in his Practice of Physick, he should fix the Reasons, Causes and Symptoms of Distempers upon the Basis of Modern Philosophy; whence it is that it was not thought improper to interpret the Latin Title of Riverius Reformatus by that of the Modern Riverius in English. To conclude, as effectual Care has been taken to amend in this all the Faults that were crept into all the preceding Foreign Editions; so it is hop'd that the whole System of this Piece being adapted not only to the singular Benefit of the Students in Physick, but also to the Improvement of such as are of a more advanced Judgment in the true Rules of this Profession, will meet with as favourable Acceptance from the Publick in English, as it has done in Latin.*

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OF THE  
*Practice of Physick.*

The First BOOK.

CHAP. I.

*Of Inappetency, or Loathing of Victuals.*

**I**NAPPETENCY may be considered several ways; either as it is a *Symptom* and the Effect of some other Distemper, then to be felt; or as it is a Distemper by it self, not depending upon any other; or lastly, as the Relicks of one that is gone before.

Of *Inappetency* in the first Sense we do not treat here, since it requires no method of Cure different from the Distemper, whose Companion it is.

*Inappetency* taken in the second and third Sense, is defined a want of Appetite to all sorts of Victuals, when the Patients, neither feel that Vellication in the Stomach, by which Hunger is made, digest well the Meat, that is taken, nor find any Taste in what they do take. And, tho' there is a difference between *Inappetency* and *Loathing of Victuals*, yet we'll treat both Symptoms as one and the same; as having the same Causes, and being cured by the same Medicines; neither do we call *Loathing of Victuals* that *Aversion*, which some have naturally for certain Meats, for that belongs to Longing, and strange Lusts call'd *Malacia*; but that *Loathing*, when without



exception all manner of Meat is rejected, and this comes up to the Nature of Inappetency.

Of this Distemper, tho' the Ancients stated more, there are but two Causes, according to the most Famous Physicians; *viz.* a Change and Debility of the Ferment, dissolving the Food in the Stomach, or a total defect of the same: for as the natural Appetite is raised by the Ferment of the Stomach, when in a certain quantity it attacks its little nervous Fibres to a certain degree; so the want and lessening of the said Appetite must of necessity depend upon the total Defect, or Diminution of the Ferment: We own that Obstructions, and other faults of the Nerves of the Stomach, that is the ends of the *par vagum*, which come out in the Stomach, may also cause an Inappetency; but, because that belongs also to the Palsie, we shall say nothing of it here; and only enquire how Inappetency, as we said before, depends upon those two Causes, *viz.* the Want and Diminution of the Ferment.

The Ferment of the Stomach then is diminished, or at least blunted; first, by the Spittle's being too viscid or greasy, or other Pituitous Humours, stagnating in the Stomach; because either by diluting the Ferment too much, or surrounding its sharp Points, they hinder the working of it. Secondly, by the Galls rising from the thin Gut into the Stomach; or *bilious* Humours from the mass of Blood shed in the Stomach thro' the ends of the little *gastrick* Arteries; which, abounding with Sulphur and fixed Salt, must of necessity spoil the nature of that Acid Humour, that caused the Appetite, and so quite destroy the Appetency.

The said Ferment fails; when, the mass of Blood being impoverish'd, it has lost that degree of Exaltation, which it has in its natural State; for, when the Blood has assumed quite a different Nature, it cannot furnish the Stomach with that due Ferment as it did before, and the Acid Salts cannot easily extricate themselves and get rid of the other parts of the mass of Blood; neither can the Animal Spirits, to which the better sort of Physicians allow so great a share in the dissolution of our Victuals, be made in a due quantity; whence it is no wonder, if for the said reasons the Stomach fails in its duty.

The Stomach is also defrauded of its Ferment; when the ways, through which it used to come, are shut up: and this happens in all Obstructions of the lower Belly, the *Pancreas*, *Spleen*, *Liver*, and *Gastrick* Vessels: For in those cases the Blood being very thick and viscous, refuses to let that Acid Humour which makes the Ferment slip from its Mass. And hence it comes, that the Stomach, cheated of its due, loaths and rejects the Aliment.

As to the evident Causes; many are commonly assigned, *viz.* the Summer Air; because by heating the Body and encouraging the Motion of the Humours, it provokes the exaltation of the Gall, which, in the manner above mention'd, causes the Inappetency. Too much Sleep, sloth, fat and viscous Meats, *Menstrual* and *Hemorrhoidal* Suppressions; because they fill the Body with bad Humours, either Serous or Pituitous; which, being brought and staying in the Stomach, hinder the Generation of the Ferment. Lastly, Cares, Watchings, Loosenesses, or other excessive Evacuations, which, by dissipating the Spirits, impoverish the mass of Blood. Obstructions likewise of the *Pancreas* may in a peculiar manner hinder the due Exaltation of the Blood, and the Generation of the Ferment; for, when there is not a sufficient quantity of the *Succus Pancreaticus* poured into the *Duodenum*, the Chyle cannot be dissolv'd, or made thin enough; whence being carried thick into the milky Veins, and little after into the mass of Blood, it thickens and changes by degrees its disposition, and in the aforesaid manner, either hinders the efflux of the Ferment into the glandulous Tunick of the Stomach; or, by retarding its working, spoils the Nature of it.

The *Diagnosis* of this Distemper is plain; for the Patients complain enough of their dejected Appetite. But the Signs are not so easily known. If there be a total deficiency of the Ferment, their will be an Obstruction in the lower Belly, to be manifested by the hardness and swelling of the *Hypochondria*; Spontaneous Weariness, caused, because the Blood being thick circulates not well in the Extremities; as also Cachexy and loss of Strength, with all the other Signs, shewing that the Blood is impoverished; and lastly there will be no Appetite at all.

But if the Ferment of the Stomach be only weakned, or diminished, the Appetite shall not be quite taken

way; but still remain in some, tho' little Vigour; and the aversion against Victuals shall not be so general. But, because such a diminution takes its rise from two Causes, as we hinted before; *viz.* the bilious and pituitous Humours, we shall now set down the Signs of both.

If therefore the Gall causes this Distemper, it betrays it self by a bitterness on the Tongue, a bilious Temperament, an inclination to Vomit, heat about the Heart, a Looseness, pain in the Stomach, and sometimes a Fever: for all these are the effects and forerunners of a bilious Humour. But if the Distemper takes its rise from pituitous Humours, that blunt and environ the Ferment of the Stomach, it shall be made manifest by refrigerant Causes gone before, as also a sense of heaviness in the Stomach, a coldness and debility of the Body, a thick Humour, voided out of the Mouth or by Stool, by a preceeding Catarrhe, pituitous Temperament; in a word, by all those things that shew the Blood to be flat and watrish.

Touching the *Prognosis*: as a good Appetite is always laudable, so the want of it and loathing of Victuals is commonly a bad Omen; and tho' it is not mortal, yet it signifies a great change for the worse from the natural State, and a superfluity of bad Humours in the Body. In Children Inappetency is worse, than in Old Men or Women; because they are more greedy, and consequently if they lose their Appetite, the change from the natural State is greater in them, than it is in Old Men or Women, in which the Appetite is of less force; because of the superfluity of serous and bad Humours, occasioned by the debility of Heat, and an idle sedentary Life. In such as are recovering from some Distemper, it threatens the return of the same, because the reliicks of the morbidick Matter, not yet expell'd, deject the Appetite: *Loathing of Victuals in a lasting Distemper is bad, says Hipp.* in the sixth Aphorism of the first Section. And in the third Aphorism of the sixth Section, *In Diseases of the Guts of a long standing, loathing of Victuals is bad, and worse if joined by a Fever.* The Reason of which is only, that the Body weakned by a long continued Distemper requires Refreshments, and Repairs; which, because

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cause of the Loathing of Victuals, and Inappetency cannot be given; whence the danger and loss of strength become to be greater.

Inappetency then, as it has divers Causes, is to be cured divers ways.

If it proceeds from the Gall; a Vein is to be open'd once, or twice at the Discretion of the Physician; yet always giving an emollient and refrigerant Glyster before it: which is to be repeated as often as Necessity shall require it; afterwards let the Patient be purged with the following Cathartick.

Take of fat Tamarinds half an Ounce; the Leaves of Succory, Sorrel, Agrimony, each a handfull; of whole Barley, red Roses, each a Pugil; boil and strain it: then add to six Ounces of it, of cleaned Senne two or three Drams, of Rhubarb one Dram, of Aniseeds, and yellow Sanders each a Scruple; dissolve in the strain'd Liquor an Ounce and a half of compound Syrup of Roses solutive, mix it for a Draught. Yet it is much better to give an Emetick before the Purge; especially if the Patient be inclined to Vomit, for this way the Stomach is better and easier clear'd of its load of Humours.

Take of Salt of Vitriol \* half a Scruple; or of white Vitriol half a Dram; dissolve it in four Ounces of lukewarm Barley-water, and make a Vomit. Or take of lukewarm Water seven Ounces; of Oil or fresh Butter two Ounces; let them take it at a draught, and a quarter of an hour after provoke Vomiting, with their Fingers dipt in Oil.

After the Purge or Vomit, to alterate the bilious Humour, prescribe a refrigerant and detergent Julip in this manner.

Take of Barley-water four Ounces; of Juice of Limons two Ounces, Syrup of Madenhair one Ounce, Sal Prunell half a Dram; mix and make a Julep. Or take of Succory, and Milk-water each three Ounces, of Syrup of Limons one Ounce, of Spirit of Sulphur six Drops; mix and make a Julep, to be continued for three or four days.

B 3

Afterwards

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\*Note. That a whole Dram may be safely given at the time.



Afterwards let him be Purg'd again with the Cathartick or Vomit above mention'd ; after that, let him bathe in luke-warm Water, taking in it once a day a Cup of Milk-whey, with a little Sugar of Roses, to be continued for eight or ten days.

But if the Distemper yields not to the said Remedies, prescribe the mineral Waters, which do Miracles in this Distemper : After the use of these for some days, strengthen the Stomach with the following Opiat.

Take of Conserve of Roses, and preserv'd Lettice each an Ounce, of Marmelade half an Ounce, of the Elediamargarit frigid, and the three Sanders each two Drams, of prepared Coral one Dram : with Syrup of Wormwood make an Opiat, of which let the Patient take Nights and Mornings the bigness of a Chestnut. For his ordinary Drink let him use Barley-water with Raisons, adding to each Draught some drops of Spirit of Vitriol, or Sulphur. *Forestus* has a Syrup that is very proper in this Distemper ; which he makes of four Pound of the clarified Juice of unripe Peaches, of the Juice of Pomgranates six Ounces, with a sufficient quantity to make a Syrup ; boil it well, and give two Ounces, Nights and Mornings, two hours before Meals. And as Inappetency proceeds from an impoverish'd mass of Blood, pituitous Humours, or Obstructions of the lower Belly, so it requires almost the same Cure. And therefore, after first breathing a Vein, let the Patient take a gentle Vomit, as prescribed before ; afterwards, allowing some respite to the Disease, give the following Cathartick.

Take of the whole Succory, Mint, Agrimony, each a handful ; of Anise and Coriander Seeds, each three Drams, of the tops of Wormwood and Marigold-Flowers, each a , boil and strain it. To six Ounces of the Liquor add of pick'd Senna two Drams, infuse, then strain it ; and dissolve twelve Grains of the Roots of Salap in it. Make a Porion. After the Purge you may alterate the Morbifick Cause, by penetrating and warming Medicines of the following Apozem.

Take of the Roots of Zedoary, Parsley, and Sarsaparill each an Ounce, of the Leaves of Mint, Agrimony, Maiden-hair and Wormwood each a handful, of the Seeds of Coriander and Fennel each half an Ounce, of  
the

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the Flowers of Elder and Marygold each \* a Pugil, boil them in a pint and a half of Water, and make an Apozem for three Morning Draughts, adding to each an Ounce of Syrup of Wormwood; or let the Patient for some days take a Glass of Wormwood-Wine Nights and Mornings. Between whiles some Remedy may be given that is comforting and promotes the Transpiration, as Venice-Treacle, Confection of Alkermes, or Hyacinth, Flower of Sal-Armoniack, Salt, or Powder of Vipers, or Hartshorn. In the mean time Glisters are not to be omitted, for by them part of the Morbifick Matter is expell'd thro' the Guts.

Take of the Leaves of Agrimony, Beet, and Mercury, each a handful; of whole Barley and Bran, each half a handful; of Liquirice and whole Raifons, each half an Ounce; Boil 'em in a pint of Water, strain it, and dissolve in it, of Hiera Picra six Drams, of Honey of Roses two Ounces, make a Glisten to be injected as often as occasion requires, and the Body is bound:

Some praise Pills mightily in this Distemper, because, by staying longer in the Stomach, they Purge and Expel more efficaciously the viscous Humours that stick to the Stomach.

Take of Aloes Succotrina wash'd with Juice of Wormwood six Drams, of Troches of Agarick and Rhubarb, each two Drams, of Rosin of Jalap one Scruple, Salt of Tarter half an Ounce, make a mass with Syrup of Wormwood. The Dose is a Dram, out of which make five or six Pills, to be given in the Morning early.

If the Body, thus purged and prepared, the Distemper continues, let the Patient take the hot Waters for several days; for they potently expel the gross and viscous Humours, if there be any left in the Stomach.

After the use of the hot Waters, or before, if needful, strengthen the Stomach with an Opiat of this Form.

Take of Conserve, made of the Fruits of Sweet-briars and of Wormwood-Flowers, each an Ounce; of Citron Peel, and Nutmegs preserved, each half an Ounce; one Preserved Myrobolan, of Confection of Alkermes, two

B 4

Drams;

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\* Pugill is as much as can be taken up with two Fingers and a Thumb.

Drams; of Coral and Pearl prepared, each a Dram; of Saffron a Scruple; with Syrup of Quinces make an Opiar; of which let the Patient take the bigness of a Hazel-Nut Nights and Mornings, two hours before Meals.

This done, to quicken the dejected Appetite again, make use of Acids. Let the Patient for his ordinary Drink take Spring Water, in which the Leaves of Wormwood and a little Coriander have been boil'd, or Mead, which is very cleansing.

When the Inappetency and loathing of Victuals are upheld and foster'd by Obstructions, hid in the lower Belly, add to the aforesaid method some potent Aperitives, as are Apozems, all Alkalies, as Salt of Tartar, &c.

The Aperitive Apozem may be prescribed thus.

Take of the Roots of Kneeholm, Asparagus, and Eryngo, each an Ounce; of the Leaves of Dandelion, Agrimony, Maidenhair, and Wormwood, each a handful; of Fennel-Seeds and Cremor-Tarter, each two Ounces; of the Flowers of Tamarisk and Elder, each a Pugil; boil it to a pint and a half, and make an Apozem for three Morning Draughts, and add to each an Ounce of Syrup of Maidenhair.

If, this done, the Obstructions remain obstinate, go over to Chalybeats as the last refuge, and prescribe thus, Take of Conserve of Maidenhair an Ounce; of sulphurated Steel six Drams; of Rhubarb, pick'd Senna, and powder'd Jalap, each two Drams; of vitriolated Tartar, the *fecula* of Briony, each a Dram and a half; of Cinnamon a Scruple; with Syrup of Roses solutive make an Opiar, of which let him take two Drams every Morning, drinking some Broth upon it, and walking for an hour after it, to be continued twelve days.

#### N O T E.

' The Cure of an *Anorexy*, or Inappetency ought to  
' be vary'd, according to the variety of the Causes that  
' produce it; yet generally gentle Vomits are approved  
' of, made of infusions of Antimony; so are likewise gentle  
' Purges, and especially Aloeticks, and the Elixirs  
' made with them, as well Acid as Volatile. Most all bitter  
' Plants, and Spices are also beneficial, and of them  
' you

‘ you may make Decoctions, Tinctures, Essences, and  
 ‘ medicated Wines: Some recommend the Spirit of Cop-  
 ‘ per very much, and all Acid Spirits, and among them  
 ‘ the most volatile, which are really not only able to cut  
 ‘ the Phlegm that sticks to the sides of the Stomach, but  
 ‘ likewise very proper to raise the Ferment, and strengthen  
 ‘ the Stomach; but to furnish them in some manner with  
 ‘ the said volatility they may be edulcorated with tarta-  
 ‘ rised Spirit of Wine. Several things made of Tar-  
 ‘ tar are likewise beneficial, as its Tincture, and liquor  
 ‘ made of its *terra foliata*. Among the Fruits, Quinces  
 ‘ are deservedly made use of here, and their Juice  
 ‘ mix’d with bitter Medicines is of great Efficacy. *Hart-*  
 ‘ *mannus* praises the Philosophick Spirit of Vitriol in  
 ‘ Mint, or Sorrel-Water, or in Wine, the Juice of Pom-  
 ‘ granates, Syrup of Limons, &c. In the mean time  
 ‘ outward Applications ought not to be neglected, of a  
 ‘ Toast soak’d in Mallago, or any other very spirituous  
 ‘ Wine and Vinegar, with some Powder of Cloves  
 ‘ strowed upon it; as also of Plaisters, Balsams, Fomen-  
 ‘ tations, and Liniments for the Stomach, to be found in  
 ‘ abundance, in Physical Authors, and Compilers of Di-  
 ‘ spensaries.

## CH A P. II.

### *Of a distemper’d Concoction.*

**T**HE Causes of a distemper’d Concoction are alto-  
 gether the same with those of Inappetency, and loath-  
 ing of Victuals; for, like them, it may be vitiated three  
 several ways; and is either diminish’d, quite taken away,  
 or deprav’d; the first the *Grecians* call’d *Bradypepsia*, the  
 second *Apepsia*, and the last *Dyspepsia*; which three Dif-  
 ferences are comprehended in one word Crudity; and of  
 this are two Species, *Acid* and *Nidorous*; to which a  
 third might be added, that is neither.

The Causes, vitiating the Concoction of the Stomach,  
 may be reduced to three Heads; and the Fault lies either  
 in the Organ it self, the Object, which is the Aliment,  
 and is peccant either in Quantity, Quality, or the Time  
 in



in which it is taken ; or in things external, as the cold or hot Air, Exercise too soon after Meals, immoderate Study, Watchings, immoderate Passions of the Mind.

The Signs of a distemper'd Concoction are a Heaviness, and Swelling in the Stomach ; acid and nidorous Belchings, a Soreness felt after the taking of hot or cold things ; a Noise, Pain, and sense of cold in the Stomach ; if the Cause of the Distemper be in the Stomach it self, its peculiar Signs, shall appear ; but if it suffers by Sympathy, they may be gathered from the Distempers of other Parts ; and, if things external be the Cause, you may learn them from the Relation of those about the Patient.

The method of Cure of a vitiated Concoction, if it proceeds from a Debility and want of the Ferment, must be the same, with that of Inappetency ; adding likewise the digestive Powders of Coriander and Anise-seeds, Cinnamon, Cloves, Nutmeg, or Hyppocras ; the Opiat of Salomon, Nuts and Myrobalans preserv'd, going afterwards over to Acids, which are likewise to be administered.

#### NOTE.

‘ To correct the disorder’d Digestion of the Aliment,  
 ‘ the Ferment of the Stomach is as much as is possible to  
 ‘ be reduced to its natural State ; and therefore the Slime  
 ‘ of the Stomach, and the vicious Acids lodg’d in it, are  
 ‘ to be gently remov’d, and alter’d with those things, that  
 ‘ consist of an oily volatile Salt, and a quick temperate  
 ‘ Acid: They are likewise to be expell’d by proper Purges.  
 ‘ Among Purges emetick, and especially antimonial Me-  
 ‘ dicines deservedly lead the Van, and their place may be  
 ‘ supply’d with the Preparations of Fole-foot ; add to  
 ‘ these continually Medicines that expel by Stool ; as the  
 ‘ Aloephangine Pills, and others impregnated with other  
 ‘ Juices, with the Addition of various Stings, of Scam-  
 ‘ mony, Colloquintida, Rosin of Jalap, &c. as necessity  
 ‘ shall require, among the altering Medicines, that is,  
 ‘ those that have an aromatick volatile Salt, are the Seeds  
 ‘ of Anise, Carway, Fennel ; Ginger, Cloves, &c. which,  
 ‘ join’d with Acids, are of great efficacy ; and therefore  
 ‘ the Mixture *de tribus*, or the Diaphoretick, in very  
 ‘ acute

acute Diseases, is very beneficial here, it being something between urinous volatile, and acid, that is really peculiar to restore the Ferment of the Stomach; Wormwood likewise, Mint, Galingal, Rosemary, Salafra, Cresses, Horse-Radish, Elecampane, Angelica, &c. and the same preserved are of great use: Wine, Spirits, Salts, as well volatile, as fix'd and lixivious.

In old Men Ambergrease, and all Medicines impregnated with it, are of great Virtue, as Confection of Alkermes, and of Hyacinth; various Lozenges of Citron, with the Specifick of Potenus, or the Juice of Pomgranates; and above all, Chocolate with Ambergrease, as also Coffee with the Essence of Amber; I add not to these things the external Applications of Tacamahak, Judaick Balsam, &c. because we have said enough on this Subject.

### C H A P. III.

#### *Of longing and strange Lusts call'd Pica and Malacia.*

**T**HE *Pica* and *Malacia* is a Distemper commonly incident to Maids and Women; I say commonly, because Boys and Men have sometimes been troubled with the same.

It is call'd *Pica* or *Pye*, from the Bird of that name; which is said to swallow little Balls of Earth; and defined a Disease, depraving the Appetite, or a preternatural hunger, directing the Appetite to things unusual and absurd. It varies as the things long'd for vary, for some have a mind to Mortar, others to Coals, Cinders, Iron, Salt, Water, Snow, Ice, Vinegar, Verjuice, unripe Fruits, Leather, &c. not so much from the variety, or various mixture of bad humours abounding in the Body and Stomach, as from the various Imaginations, Phanxies, and Prejudices; either inborn or acquired elsewhere.

Some throw the Cause of this Distemper on the humours restagnating in the Stomach; which as their Nature varies, lead the Appetite to various things; whence  
arise

arises the Question in Sennertus and the Ancients, *Whether those humours are like the things long'd for, or opposite and contrary to them?* Who, with the rest, afterwards concludes, that those depraved Humours direct the Appetite to things like themselves. But who sees not how much they are mistaken? as if the Humours, abounding in the Body, had any Analogy with Mortar, Cinders, Barth, Cinnamon, &c. when the Acid Humour that abounds in the Body and Stomach leads the Appetite rather to Alkalies, as it appears in melancholy People, that delight in dry and solid Food; the same might be said of other Humours; but to wave this Question, which is of no use, we'll say that it is true, that in the *Pica* and *Malacia* the bad Humours abound in the Body and Stomach; as is evident from the retention of the *Menstrua*, which occasions this Distemper; but that those Humours, whatsoever may be their Nature, and how different soever that Vellication, which they raise in the Stomach, is from the natural, can never lead the Appetite to such and such things, which never were tasted and sometimes never seen before; and therefore we must look for some other additional Cause, which helps the first, and this is nothing; but the imagination, phansie, and prejudices, as we said before; wherefore this seems rather to belong to melancholy than to any other Disease. These Phantasies and Prejudices are either Hereditary and transmitted from the Mother to the Child, as I have seen in a Boy; or induced by others, as often it happens in Maids, that create one another an Appetite to certain things by perswading them, that by taking such things they formerly have made themselves look fair and handsome; with which the Mind being struck, afterwards, when occasion serves, longs for the like. Or lastly, this Appetency of Longing People may come upon 'em by chance; as when looking up and down for Food, that is able to assuage that Vellication, which in their Stomachs they feel so different from the Natural: after tasting of many things, casually light on some, as Coals, or Chaulk, that are very savory to them, and lay the Sense of that preternatural Hunger better than any thing else.

Here might be asked whether the Maids and Women that have the Green-sickness first long for this trash, which occasions

occasions the Distemper; or whether, to long for it, they must have the Distemper first.

Tho' indeed it is vulgarly believed that the use of such trash brings the Distemper, yet I am of Opinion, that the Distemper lies hid in the Body before the Women long for it; for whence could this depraved Appetite proceed, was it not from the vitiated mixture of the Blood; tho' in the mean time I deny not, that the Distemper sometimes, nay very often, is exasperated by such trash. The external or procataretick Causes of this Distemper are all gross and cold Food, Summer Fruits, Acids, a sedentary Life, a thick Air; in a word, all those things that by making Obstructions, and impoverishing the Blood, are able to suppress the menstrual Flux, and so fill the Body with bad Humours; or by quite spoiling the Blood to produce a Cachexy. Such are also the immoderate use of Water, &c. and this is the Reason why the Maids of *Montpellier*, who most all, as well as abundance of Married Women, are very abstemious, are so much troubled with this Distemper. The assisting Causes are Prejudices, &c.

As for the *Diagnosis*, there is no need of any.

Touching the *Prognosis*, this is a chronick and obstinate Distemper, because the Cause is such. Yet it is not dangerous, unless contracted after a Greensickness of long continuance; such a one, as is become habitual: for then it is a sign that the Blood is much impoverished, and that worse Distempers are to be fear'd, viz. a Cachexy, Dropsie, Swounding, Prylick.

The Cure of this Distemper is absolved by several Remedies; as for those that are general, often repeated and purging Glisters often injected are proper; if you Bleed do it sparingly, for in this Distemper it answers no indication: Among particular Remedies they recommend aperient Apozems, volatile Spirits, and Salts, Chalybeats, preparations of Mercury, fix'd Salts, spirituous Liquors, aperient Broths, with Cresses, Chervil, Fumatory, Wormwood, Powder of Vipers, and other Remedies that are usually given in the Greensickness and Obstructions. To Women with Child in this Distemper, the Purging Remedies, as well in the Glisters as the Potions, are to be prescribed in a less Dose for fear of miscarrying. If the  
Distemper



Distemper proceeds from Prejudices, the Physician must make use of all his Skill to destroy those Imaginations: If a Boy has this Distemper, let him in the beginning take a Vomit to wash the Stomach, and afterwards, if there be no indication to the contrary, Sudorificks, Antimony, Diaphoretick drying Ptsanes, Steel and other Mineral Waters, Chalybeated Opiats.

## NOTE.

‘ In this Distemper Vine-Water, that stills out of the Vines when they are cut in the beginning of the Spring, is recommended as a Specifick; it may be mix’d with Treacle-Water, and Syrup of Citrons, Oranges and the Rinds of Pomgranates. Conserve of Mint likewise, and other Medicines made with the same, taken for some time, are of singular virtue in this Distemper.

‘ Volatile Salts also help not a little; but in Women with Child they are cautiously to be used, for fear of miscarrying. I omit many things alledged in the Cures of the Inappetency, and the vitiated Concoction, as also the general Remedies to be fetch’d from the various Causes of the Distemper; because we have treated of them already, and I design not to make many Repetitions in these Notes.

## C H A P. IV.

*Of Canine Appetite.*

THE depraved Appetite is of two Kinds; one is that which is inclined to Food, hurtful in the quantity, and is by Authors call’d *Canine Appetite*; the other is that which is inclined to Food, only hurtful in its quality, viz. when trash and unusual things are long’d for, which is call’d *Pica* and *Malacia*. Of the second having treated already, the first remains yet to be considered.

*Canine Appetite* then is a Distemper in which the Patients perpetually crave Victuals, and those of the more solid sort; and, tho’ they devour them in great quantities, yet are never replenished. By another name it is call’d *Boulimia*, that

that is, a great Hunger; or *Phagadema*, that is, a corroding Hunger; a Name which is usually given to corroding Humours. And tho' *Boulimia* and *Canine Appetite* have one and the same Signification among Physicians, yet sometimes they are distinguish'd; and *Canine Appetite* is call'd that Distemper, where, after the Stomach is cram'd with Victuals, a Vomiting insues, as we see in Dogs, or at least a Looseness, where the Vomiting fails: But a *Boulimia* is followed by Vomiting more than Looseness; but only *Lypothomies* or Faintings.

Besides these differences of the preternatural Hunger, there is yet another, in which the copious cramming is neither succeded by Vomiting, Looseness, nor Fainting, but an insatiable desire of eating continues, the Stomach still conquering and digesting whatever is devoured, as is witness'd by the Observations of *Sennertus*, *Schenkius*, and others. The affected part is the Stomach, which is the Organ of Hunger and Chilyfication; and the continent Cause is not the sense of Suction and Inanition; which now adays is pretty well banish'd from the Schools; but that of Vellication of Humours hurtful by their Acidity: For the same Cause which stirs up the natural Hunger, when more intense, excites also the preternatural. So we see, that melancholy People, as abounding with Acid Juices, are given to be Hungry. And those too Acid Humours producing the *Canine Appetite* are not derived from the Spleen; but the Spittle which is too Acid, and a Humour squeez'd through the glandulous Tunick into the Cavity of the Stomach; or, as *Sylvius* will have it, from the Pancreatick Juice, or its too Acid steam provoking the nervous Tunick of the Stomach: For that an Acid Humour is more able than any other to excite Hunger is manifest by experience; which daily shews us, that Acids raise the Appetite, and that those, who abound with such Humours, never loath their Victuals; contrary to what happens to such as are fill'd with bilious and other Humours. This preternatural Hunger is caused by an Acid, for as much as it exceeds either in Quantity or Acidity. Besides this Cause of excessive Hunger already mentioned, there is yet another, tho' it is seldom seen to produce this Distemper, *viz.* Worms bred in the Guts in such Quantities, as are able to convert all the Aliment, that is taken, to their own use;

by

by which the Patient is defrauded of his Nourishment, so that he is always Hungry. Thus *Trellianus* tells us of a Woman, that had a *Boulimia*, and voided a Worm twelve Cubits long; who was cured by the use of *Hiera Picra*.

The external Causes are the use of Acids, Sadness, a melancholy Temperament, and all things, that fill the Body with acid Humours.

The Cure is absolved by oily, fat Medicines, Wormwood-Wine, Coral, Baths, Pearl, Chalybeats, Bolearmenack, seald Earth, aperient Apozems, fix'd Salt, Narcoticks: Phebotomy is here of no use; but the hot and other mineral Waters are proper:

#### N O T E.

‘ The *Canine Appetite*, and *Bulimy* differ not a little; for the first is attended with Vomiting, and sometimes a *Lientery*; and the latter with fainting Fits, and therefore the Method of curing them must be somewhat different: for in the one the stomachick Acid, which comes up as it were to the Nature of *Aqua fortis*, and therefore the cause of many Irritations, and consequently Stools; must be infringed, the gather'd Crudities expell'd, and the Stomach, and Guts strengthen'd; and in the other, the principal Force of the Remedies ought to be employ'd in preventing the fainting Fits, our Author has given us Remedies for the first; and not for the latter Indications: Of which therefore we shall treat shortly. To prevent then the fainting Fits, necessarily arising from the greedy devouring of Victuals, first we must take care of the choice of the Victuals, that the Stomach be not molested, and then mix spirituous, and volatile, especially oily Salts with them. *Hartmannus* recommends the Essence of Balm, extracted with Spirit of Wine; a spoonful of it being given now and then; with some drops of Oil of Carway; *Rivenus* praises Ambergrease; five or six Grains of it being taken in a soft Egg; and this he reckons to be a Specifick in this case. *Sylvius* is for all Aromaticks; as Mint-water mix'd with Spirit of Scurvygrass, and Tincture of Cinnamon; as also oily Remedies; as the distill'd Oils of Mace and Juniper.

‘ Juniper-Berries, of each of which he orders now and  
‘ then two or three drops. Some drink generous Wine  
‘ pretty copiously, others prescribe all fragrant, and even  
‘ strong scented Remedies, and the use of Confections  
‘ and all Cordial Waters; but I cannot see, that any  
‘ thing can be given more proper than volatile oily Salts,  
‘ which we proposed at first; and therefore I believe that  
‘ we must chiefly make use of them, yet without neg-  
‘ lecting the other Remedies.

## C H A P. V.

*Of Drought.*

**T**HE Thirst as well as the Hunger suffers several ways,  
it is diminish’d, as in pituitous or melancholy People  
that are call’d Spitters; and all others, in whom the mass  
of Blood abounding with a watrish, and especially a sweet  
and inspid Humour, furnishes the Throat and *Oesophagus*  
with a great quantity of it, or it is quite taken away,  
as it happens in those that are distracted; in whom, tho’  
the Cause, which makes the Thirst, works continually  
upon the Stomach; the Imagination employ’d in various  
fancies, perceives not the squeezing and pulling that is  
made in the Stomach: Or lastly it is depraved, as we  
may see in those whose Appetite leads ’em to absurd and  
unusual Liquors, as are Vinegar, Lime Juice, Salt Wa-  
ter, &c. and in those that, loving drinking immoderately,  
fill themselves with Liquor, yet never quench their  
Thirst.

The Thirst’s being diminished, because it has the same  
Cause with that kind of Inappetency treated of before,  
*viz.* pituitous and inspid Humours, sent to the Stomach  
in excessive quantities, requires no method of Cure,  
different from what we said of such an Inappetency;  
this therefore we shall pass over in silence. But as for  
that fault of the Thirst, where it is quite taken away,  
since it is always the Effect and Symptom of Acute  
Diseases, especially in those where the mind is affected,  
we refer its fuller elucidation to the places where the said  
things are treated of. As we have mentioned two kinds



of depraved Thirst, one after absurd and unusual Liquors; the other, in which great quantities of Liquor are frequently coveted; we shall not treat here of the first, as belonging to the *Pica* and *Malacia*.

It remains then, that we treat of that kind of depraved Thirst, in which we cover immoderate quantity of Drink, and this is to be considered two ways; for it is either *Idiopathick*, and proceeds from the fault of the Stomach or the *Oesophagus* themselves, or it is *Sympathick*, and is occasion'd by faults of the adjacent parts; and such is that Thirst, which is in Fevers, Inflammations, the Dropsy, Diabetes, &c. of the latter we are not to speak here.

But the *Idiopathick* Thirst, which is a Distemper by it self, and requires a Cure by it self, without considering any Distemper on which it depends, is defined, *an immoderate Appetite of wet and cold; or a Distemper, in which the Patients desire abundance of Liquor, which, tho' taken, quenches not the Thirst that troubles them, unless it be only for a very short time:*

The Cause of this Distemper, the Ancients say, is the defect of Humidity, that is used to moisten the Throat, *Oesophagus*, and Stomach; which defect proceeds from things that are heating and drying; but how much they have err'd from the Truth is manifest by this; that a positive Distemper, as is the vitiated Thirst, cannot proceed from a negative Cause, and the defect of Humidity: Besides, that daily Experience destroys this Animadversion; for nothing is more frequent, than to hear Sick people complain of a driness in their Mouths and Throats; and yet in these parts, besides the *Vasa Salivaria*, innumerable Glandules leave continually their lymphatick Humour: Add, that it can hardly be conceived how the Stomach and Throat, which are continually moisten'd by the circulating Blood, should become so dry, as to be squeez'd and drawn together worth speaking of.

The more likely Causes of this Distemper are of two sorts, the Analogy taken from Eatables, that are used to cause Thirst: Those Eatables then, that give us the Appetite to drink, are either sharp, as Pepper, Ginger, and all things that are Pepper'd; or they are Salt, as  
Salt

Salt it self, and all things that are Salted. So likewise two sorts of Humours are generated in our Body; that brought to the Stomach or *Oesophagus* raise our Thirst; and it is either Salt, as in Dropical People, and those, that after a Salt Catarrhe, are troubled with excessive Thirst; or Sharp, as in ardent Fevers, Inflammations of the parts, and other Distempers, in which the mass of Blood has contracted a sharpness, and the Gall has been much dried and burnt up before.

If the Blood then has assumed a Salt Nature, as it may easily, especially in those that live upon salt Victuals; and many other cases, as may be seen in Dropsies and Catarrhes; it is certain, that the Humour brought to the Stomach and *Oesophagus* through the Arteries, and there strained through the Glandules, is very Salt; whence it is no wonder, if at that time it raises in us an immoderate desire to drink, since that is very natural to all things that are Salt.

The Blood also is made sharper sometimes, especially after the use of hot and dry Victuals, strong Wine, after Watchings, Evacuations of the Body by strong Purging Medicines; And lastly, by staying long in the Sun, or near the Fire; the reason of which is, that the said Things are apt to dry, exalt and burn up the Gall; from whence no less Acrimony is imparted to the Blood: For in this case it is not to be doubted but that the Blood, loaden with burnt up Particles, communicates that fault to the Ferment of the Stomach, and as it were perverts the same; and not only to the Stomach, but the *Oesophagus* likewise, which is the Seat of Thirst. Wherefore it shall not raise an Appetite to Eatables, which proceeds from an Acid, but rather a vast desire to drink, that the bilious and burnt up Particles, which the *Oesophagus* is full of, may be moisten'd, cool'd, and dissolved.

And we must not think that this bilious Humour, now made sharp by being burnt up, is sent to the Stomach by the Blood only; for it often comes from the Gall, which very dry has been kept too long in its Bladder, from whence at last breaking forth, and fallen in the *Duodenum*, it sends some very subtile Particles to the Stomach and *Oesophagus*; that by vellicating the Fibres, and no

other means, than vellicating the Acid, bring forth Thirst.

Let no Body object here, that the bilious Humours, partly through the Arteries, and partly through the *Ductus Cholidochus* carried into the Stomach, or as well into the Stomach as the *Oesophagus*, must rather provoke Vomiting than Thirst; for I suppose, as it is highly probable, that this Gall is not Oily, bitter, and full of Sulphur, such as she must be to excite Vomiting; but very dry, burnt up, and if not quite, at least partly destitute of Sulphur, which the heat has set a flying: Wherefore it is now so far from being bitter, that it is become rather Salt by the exaltation of the Salt, and depression of the Sulphur; and consequently must produce not Vomiting, but a desire to Drink.

The external Causes of Thirst are a hot Air, the excessive use of sharp and salt Meats; as Flesh and Fish salted, immoderate Exercise, Travelling, especially a foot, a considerable loss of Blood, or Sperm, Urine and Sweat voided in quantity.

The *Diagnosis* of this Distemper has no difficulty in it, for the Patients complain fast enough of the Thirst that troubles them: But the Causes may be discern'd by what's gone before; as the use of hot, sharp, salt things, a salt Catarrhe; as also by the Temperament and the Taste, which the Patients perceive in the Mouth and on the Tongue; lastly, by the Evacuation of a salt and sharp Humour.

Concerning the *Prognosis*, the Thirst, which is excited by external Causes, is no way dangerous; because it is easily quench'd by drinking; but that Thirst which proceeds from Internal Causes, tho' it is not mortal, has yet more danger, because it shews a great corruption and depravation of the mass of Blood, which cannot be so easily repair'd.

The Thirst that follows upon a Dropsie, Diabetes, ardent Fevers, and internal Inflammations, is full of danger, because these are grievous Distempers, and the effect smells of the nature of the Cause.

The Cure consists wholly in evacuating and altering Medicines. Evacuations are necessary to expel the Humours preternaturally contained, partly in the Blood, partly

partly in the Stomach. The altering Medicines are used, that the Blood, which is either too Salt, or too sharp, may be temper'd, and, if possible, reduced to its former state. After Bleeding then, which draws away part of the peccant Matter, and prepares the Body for Purging, it being once, or twice, as occasion shall require, repeated; prescribe the Patient a Vomit presently, that the Humours provoking the Stomach, may sooner and easier be voided by the Mouth.

Take of white Vitriol, half a Dram, or of Salt of Vitriol a Scruple, or half a Scruple, according to the Age of the Patient, in some fat Broth make a Vomit. The day after order an emollient and cooling Glisten; that that part of the morbid Matter, that skulks in the Guts, may be expell'd downward.

Take of the Leaves of Mallow, Violets, Lettice, and Purslain, each a handful; Licorice and stoned Raisins, each half an Ounce; whole Barley and red Roses, each a Pugil: boil them in a pint of Water, and in the Liquor strain'd dissolve of Catholicon for the Mouth half an Ounce; Honey of Violets two Ounces; make a Glyster to be injected at a commodious hour, and repeated when required. The same day also prescribe an emulsion in the following manner.

Take of sweet Almonds blanch'd and macerated in Rose-water four parts; of the four greater cold Seeds an Ounce and a half; beat them, as Art requires it, in a Stone Mortar, pouring upon them by little at a time six Ounces of the Decoction of Barley and Licorice; then add of Syrup of Limons one Ounce; of Sal Prunel half a Dram, make an Emulsion: A Day or two after, that the Patient may take some respite, and not be wearied with Physick, give him the following Purge. Take of fat Tamarinds an Ounce, of the Leaves of Sorrel and Succory each a handful; of red Roses boil it to six Ounces; in the strain'd Liquor infuse of pick'd Senna two Drams; of Cassia newly taken out six Drams; or, if the Distemper proceeds from the burnt up Gall, of Rhubarb half a Dram; Anise-seeds and Sal Prunell each half a Dram; the Liquor being strain'd, dissolve into it of Manna of Calabria an Ounce and a



half, make a Potion; which let the Patient take, be orderly, and keep within.

Afterwards let the Patient go into a Bath of luke-warm Water, in which let him take a Glass of Goats Milk Whey, that of Maidenhair has been steep'd in over Night.

In the mean time Acids must not be neglected; for, as they raise the dejected Appetite, so they quench the too vehement Thirst, and temper the Humours, whether too salt, or too sharp; and therefore those Juleps that are proper in Inappetency and a vitiated Concoction, are no less useful here; as also Emulsions and large draughts of Water, so the *Viscera* be but sound. But if these bad humours are only heaped up in the Stomach, as being the consequence of Obstructions of the lower Belly, as it happens most commonly, then, after Purging, you must prescribe the Chalybeat Opiat above mention'd.

Else let him take the following Opiat prescrib'd in the Cure of the Inappetency. If after all this the Distemper continues still, let the Patient drink the Waters in a large quantity for 15 days, taking in the beginning, the middle, and at the end of that time the aforesaid Purge.

Let the Patient in the mean time keep a reviving and cooling Diet, and his ordinary Drink be Barley-water, quickned with some Juice of Limons, or drops of Spirit of Vitriol, or Sulphur.

#### N O T E.

' There is hardly any thing to be added, to what our Author says of Drought; for watry Remedies mix'd with Acids, perform sufficiently what is here required; but that the copious swallowing of Liquor may not molest the Stomach, and weaken the Guts, or that it may not do worse, as *Amatus Lusitanus* relates of three that died by drinking of cold Water in too large quantities; it will not be amiss to prescribe now and then a Gargarism, made of appropriated Waters, with the addition of Acid Spirits, and clarified Juices, as well of various Fruits, as Citrons, Prunes, Pomgranates, Barberies, Corants, Quinces; as likewise Plants, ' House-

‘ House-leek, Purslain, Water-cresses, Cleavers, Sorrel.  
 ‘ If there be something that is viscous, and full of fixed  
 ‘ Salt in the Throat, which is very apt to irritate, and  
 ‘ consequently to provoke Thirst, to be cut and wash’d  
 ‘ away, there is nothing better, than to mix the purer  
 ‘ sort of Volatile, and spirituous Remedies with Garga-  
 ‘ risms.

## C H A P. VI.

### *Of an Inflammation of the Stomach.*

**T**HE Stomach, as well as other parts, may be subject to all Swellings of what sort soever. There are four sorts of Tumours, of which the *Phlegmone*, or Inflammation is the most dangerous and most frequently seen; and therefore, passing by the rest, we shall treat here of it; and afterwards of the Imposthume and Ulcer of the same Entrail, in which the Inflammation may end.

The Inflammation of the Stomach then differs not from those that invade other Parts, but only in place; and is made altogether in the same manner: for it is nothing else but an Effusion and Extravasation of Blood through its Substance; which, as it is either thinner, thicker, or more waterish, produces a Swelling that is hotter, harder, or more waterish.

This Effusion and Extravasation of the Blood, through the Membranes of the Stomach, has commonly two sorts of Causes, Internal and External; the Internal are the Thickness and Viscidity of the Blood, hindering the free Circulation through the Capillary Vessels of this Entrail: And I believe with *Silvius*, whatever several Physicians say to the contrary, that this for the most part causes Inflammations. But as for the Reason, why an Inflammation is produced in the Stomach rather than any where else, that belongs on the Disposition of the part. The other Internal Cause, which is able to produce Inflammations in the Stomach and other Parts, is the swelling and fermentation of the Blood in the Vessels, from what Cause soever it proceeds; which makes it, because of its violent Motion and Expansion, lay it self down upon the Sto-

mach, or other Parts, either by the Rupture or *Anastomosis* of the Vessels, according to the inward or outward looseness and flaccidity it finds in those parts. So we see a Cold, an interrupted Transpiration, the use of hot Things, Anger, Fevers, and other Things, by which the Mass of Blood is violently agitated, are followed by Inflammations, sometimes of the Lungs, other times of the Liver, or Stomach, according to the various Dispositions of those parts.

The External Causes of this Distemper are many; very hot Food, the excessive use of Wine and hot Liquors; a Contusion upon the Stomach, vehement Purges, strong Vomits, Cantharides, all Poysons, and whatever is able to corrode the Stomach.

The *Diagnostick* Signs of this Distemper are a great Pain in the outward part of the Belly, that burns and pricks quite to the Back, when the Inflammation inclines to the hind part of the Stomach: A swelling in the same Part, and Exasperation of the Pain when press'd; a difficult Respiration, bloody Phlegm, and sometimes a very ardent Fever, the Shoulder-blades are pull'd downward, an outward hot Fever, vehement Thirst, but the most certain Sign of all is, when some very hot Broth is taken, and no Heat perceived. By what *Riverius* admits, it is very difficult for a Physician to distinguish an Inflammation of the Stomach from one of the Liver, especially its concave part; because those parts are very near one another: Yet by the site of the Pain, the more or less the Heat of the Broth is perceived, the greater or lesser Weariness of the Stomach, and other Symptoms recited in the Inflammation of the Liver, it may be distinguish'd; besides that to know an Inflammation of the Stomach from one of the Liver is of no great use; because the Methods of curing them are much alike, and what's good for the one is used for the other.

As for the *Prognosis*, the Distemper, as being acute, is full of danger; which is the greater, the more grievous the Symptoms are, and the less the Strength of the Patient. That Inflammation, which invades the whole Substance of the Stomach, is more dangerous than that which invades but one side of it. In fine, since the Stomach performs such a vast service to the Body, and is ally'd to the Heart,

Heart, the Patient must be in a sad Condition whenever it suffers an Inflammation.

This Inflammation once made by the Effusion of Blood through the Membranes of the Stomach, if it kills not the Patient, is either discuss'd or suppurated; for inflamed Swellings can terminate but these two ways. If the first happens, it is good; if the second, then one Distemper is only changed into another; viz. an Imposthume, that is, a gathering of Matter; and this Imposthume is produced by no other means, than the extravasation of the Blood, that stagnating in the Stomach turns to Matter; which is done by a certain Fermentation raised in the extravasated Blood by the Exaltation of the acid Salt, and a Precipitation, as it were, of the Sulphureous Parts of the Blood, loosen'd from their sharp Salt, as in Chymistry the Milk of Sulphur: the Matter now thus made breeds an Imposthume; which is known by the remission of the Fever, Pain, and other Symptoms; and this Imposthume, by the Acrimony of the Matter that corrodes the Tunicks, must be broke at last, either in the out or inside of the Stomach, and from hence comes an Ulcer; but because an Ulcer in the Stomach is not only produced this way, but from many other Causes, they are therefore also to be recited here. Among the Internal Causes are counted the sharp Humours that are bred in the Stomach, or flow to it; as it happens in Cancers and Ulcers of other Parts. The External Causes of Ulcers are sharp Poysons, the use of corroding things, or a Wound of the Stomach, that could not be healed, and so degenerated to an Ulcer; and in that they are distinguish'd: An Ulcer is known by what is gone before, as an Inflammation, the use of sharp things, a Wound, &c. the rupture of a Vein by violent Vomiting, a Pain and Irritation upon the taking of the least Things, if the Ulcer be Internal; it is to be known also by Matter voided by vomiting or stool, a dejected Appetite, slow Fever.

As for the *Prognosis*, an Ulcer in the Stomach is always to be pronounced mortal; unless it be very small, and on the outward Superficies; not because it is Membranous, and that the Parts not easily heal; as *Hippocri* says in his Aphorisms; but because of the Service it does, which failing, none but bad Humours can be bred.

The



The Cure of this Inflammation is to be begun by bleeding twice, thrice, or four times, at the Physician's Discretion, the Patient's Strength, Temperament, &c. shall direct; a very spare Diet is to be observed: As for the opening of the Hæmorrhoid Veins, which *Riverius* recommends, I cannot see what good it does; no more than Cupping, and Bindings, which are out of use: Because Purges cannot be given safely in this Distemper, the frequent Injection of purging Glysters must supply their Place: between them use refrigerant and lenitive Medicines; Emulsions, because they assuage Pain, are proper with the Narcotick Syrup, or Laudanum; also in the beginning your refrigerant and something astringent Juleps, with acid Juices or Spirits, the Liquor not exceeding four Ounces, not to trouble the Stomach. If, the Distemper growing more tractable, a Purge may be given, let it be of Tamarinds, Cassia, or Manna, with a small Quantity of Rhubarb; all which stir the Humours but little: Let his ordinary Drink be Barley Water with Sal Prunell. Mean while in the beginning you may bathe the Part with some Vinegar Posset, or astringent Decoction to repell the Fluxion: And to open the astringent Decoction add warm Medicines, as Marjoram, Mint, Wormwood, Anise and Coriander Seeds: Inunctions I am not for; because they obstruct the Pores, and hinder Transpiration: But if the Inflammation inclines to Suppuration it is to be help'd; not only with Pain-appeasing Decoctions, taken inwardly in small Quantities, made with the Roots of Marshmallows, the Tops of Camomile Flowers, Line Seeds, &c. but also with External Bathings of the same Medicines; adding to them the Roots of Lillies, boild Onions, Bearfoot, &c. the Imposthume being broke, let him take a little Turpentine, vulnerary Decoction, Barley Broth, adding Honey and Sugar, which cleanse very well. Purges of Cassia, or Manna are proper now and then repeated; Balsam Sulphuris made with Oil of Turpentine is proper in all internal Ulcers; as also that of *Peru*, some Drops of it being taken in Broth. The drying Ptyfane; not because, as the Ancients thought, &c. The Mineral Waters are of great Service to consolidate; and so are Decoctions of Wall-wort with Roses, Plantain, &c.

NOTE,

## N O T E.

‘ An Inflammation of the Stomach is indeed a very pernicious Distemper, of which few recover; it ought to be opposed by Phlebotomy, and the Medicines proposed by our Author, adding often Milk Whey with the Juice of Citrons, or Spirit of Sulphur, the Tops of the lesser Wormwood being mix’d with it; not neglecting in the mean time external Fomentations of Emollient, discussing, and gentle Aromatick Remedies; whose Particles insensibly received in the Vessels of the Skin may, by the Help of the Circulation, be carried to the part affected, and by relaxing the neighbouring parts, and animating the Fibres, are able to promote the Circulation of the Humours, whose Stagnation is the Cause of so many Disasters. *Hartmannus* recommends Sal Prunel, if a Scruple or two be dissolved in a sufficient Quantity of Mint, Succory, or Wormwood-water; which must be taken by often sipping: The same Author says, that this is more efficacious, if a Drop or two of Spirit of Lead be put in the aforesaid Water. As for the Ulcers, remaining after the Inflammation, Sudorifick Decoctions are proper for them; especially the Syrup made of the Juices of Ground-Ivy, Periwinkle, Stanicle and Sarafens, Comfrey with the Liquid Extract of Sassa, and China, and a sufficient Quantity of Sugar; but the Remedy, which excells all others, is made of Sulphur, not in the manner that those vulgar Balsams, there biutinated, Anisated, &c. are made, but prepared after a more noble Method; *viz.* as the Noble *Boyle* describes in his Experimental Philosophy; as also in the Dissertation of Simples.

## C H A P. VII.

*Of the Cholera.*

**T**HE *Cholera* is one of the fiercest Distempers that infects the first Passages: it is so call’d from the Gall, which in this Distemper is copiously thrown out upward and downward; and by the *Grecians* call’d *χολή*; as *Galen* says; or *ἀπὸ τῶν χολαίων*; that is, from the Guts, which

which it is used to invade, as *Trallianus* will have it: with *Hippocr.* they make two Species of it; one, which is called humid, from the copious evacuation of Humours upward and downward: This Species is the most frequent, and invades People often.

The other, which is call'd dry, because in it no Humours, but Winds or sharp and very piercing Vapours break forth backward and forward. Of this dry and fatalent *Cholera* we shall not say much; because, besides that it is not common, it is, as all Authors confess, not so dangerous, and so requires not the more serious Care of the Physician: It comes indeed so near the Wind-Collick, or Hypochondriack; that it seems little to differ from them, and requires the same Cure. Yet we shall say by the by, that these Winds which are voided in a dry *Cholera*, are to be derived from two Springs: viz. The Victuals being crude, bad, windy, and taken in too great a Quantity; or if they are good and of laudable Juices, their being not well mix'd and fermented; by fault of the Ferment, the Gaul, the *Succus Pancreaticus*, or any thing else in the first Passages: Or, as it pleases *Sylvius*, from various Humours of different Natures meeting and fermenting together in the first Passages, as the Gall, and *Succus Pancreaticus*, or any other, from which nothing, but abundance of Wind and Vapours can be sent up; as it happens in Chymical Liquors. So we see, that the *Hypochondriaci*, to whom these intestine Effervescencies are very familiar, because of their very acid Humours in the lower Belly meeting with the Aliment or Gall, are much subject to Belching and Farting. But let this suffice of the dry *Cholera*.

The humid *Cholera*, to begin from the Definition, is a continual and very violent Excretion of sharp bilious bad and corrupt Humours, both by Vomiting and Stool, accompanied with Anxiety and the Belly-ach. It may be distinguish'd in two sorts; the one, which is a Distemper by it self, that is, not depending upon any other then to be perceived. The other, which is not a Distemper by it self, but depends upon another Distemper then sensibly the Body afflicting, whose Symptom it is.

So in Fevers and Inflammations of the lower Belly comes a *Cholera*, which is not used to be call'd *Idiopathic*, but *Sympathick*.

There is a Controversie about the seat of this Distemper among the Authors ; of which some say the Stomach, others the Guts, and others again, both the Stomach and Guts are affected. But, tho' *Galen*, and with him *Riverius* asserts, that the Stomach is principally affected, and the Guts but secondly ; and others hold, that the Guts suffer principally, and the Stomach only by being contiguous to them ; I am of the opinion of those that put the seat of the Distemper in both, *viz.* the Guts and Stomach, which shall appear by the Causes.

The Causes then that produce this Distemper, are either from within or from without ; to the first Class belongs the bilious Humour, grown sharp, and in great quantity brought into the Guts and Stomach ; which, how apt it is, with its Salt and Sulphur combin'd together, to produce Vomiting and Stools may, not to repeat things, be easily gather'd, from what we said about Vomiting.

For a merely Acid, or merely salt Humour, whatever *Riverius* says, cannot by themselves excite Vomiting, or Stools : For Acids and Salts are not of a Constitution, that is required, violently to drive out Spirits. I say that the Acid and Salt Humours by themselves, cannot produce this Distemper, for by a Circumstance they may, especially if they be mix'd and ferment with other Humours, as also with their quantity, &c.

But the bilious Humour, or at least that which comes near the nature of the Gall, flows into the Guts and Stomach, sometimes through the ends of the Arteries, that are spread up and down there, which is *Serum* impregnated with a bilious Humour ; and this happens either in a violent Fermentation of the Humours, Fevers, or a very great heating of the Blood ; and consequently an exaltation, and attenuation of the Gall, caused from Watchings, being long in the Sun, immoderate Exercise, and other things that heat the Blood or the Gall, which produces the *Cholera*, by some obstruction in the *Ductus Cholidochus*, which leads into the *Duodenum*, too long detained in its Bladder, grows sharp ; and afterwards,  
the



the Canal by some accident being open'd, it violently runs in great quantity into the *Duodenum*; in whose annular Fibres it causes Convulsive motions, and consequently Stools; but, because the Gall flowing with such a force into the *Duodenum*, part of it is drawn up into the Stomach, or at least the Vapours and Exhaltations of it, 'tis no wonder if it causes the like Convulsions there, and consequently Vomiting.

Some raise this difficulty, How can the Gall (say they) produce this Distemper, since the Patients void often more of it, than is to be found in all the Body? which is soon answered, by saying, that tho' the Gall causes the *Cholera*, yet the Humours voided are not mere Gall, but abundance of *Serum*, squeezed by the violent motions, through the Arteries, and impregnated with Gall; besides Water and other Liquors that are given to the Patients, with which the Gall is mix'd.

The Causes from without, that are able to produce this Distemper, are all crude Victuals, unfit for Concoction; as Onions, Garlick, Cabbages, Melons, Cucumbers; which, if they meet not with a strong Stomach corrupt and rot, partly in the Stomach, partly in the Guts, and by their rottenness acquiring an Acrimony, Analogous to that of the Gall, they raise every where great irritations of contractive motions, upon which the Vomiting and Stools insue. But all these things come sooner to Action in the Summer than the Winter, as *Hippocrates* notes; because then the Concoction is not so good; partly, because the Spirits are dissipated, and partly because the Gall is then more exalted by the heat: Besides what we have named, there are other extrinsick Causes, that are able to produce the Distemper we speak of; such as *Mochlik*; that is, very violent Medicines and Poysons, when part of them remaining in the Stomach, whilst the rest is squeez'd down into the *Duodenum*, they exert their Power in both, and that by their Sulphur and Salt, which is able to raise Convulsive motions in the Spirits, as also by the irritation which sets 'em in an uproar.

This Distemper wants no *Diagnosis*, for it more than sufficiently shews it self by the excretion of sharp and bilious Humours upward and downward; the motion  
of

of Stomach and Guts, &c. wants no Explication, no more than the inflection, pains, and heat, The Thirst proceeds from the bilious Vapours, that from the bilious Humours rise to Throat and *Oesophagus*: The Anxiety is caus'd from the Pains, partly of the Guts, and partly of the Stomach, especially its upper Orifice, which is the seat of the Stomach-pains, &c. The low Pulse, Fainting, and coldness of the extremity, that are observed in the *Cholera*, are occasioned by the Heart's motions beginning to fail, by reason of the pain, and irritation in the upper Orifice of the Stomach; for there is a correspondence by the way of the Nerves, between that part and the Heart, to which such Symptoms happens not, but when Death is near, and consequently a solution of Spirits and Strength.

The Signs of the Causes are easily discovered, if they be outward, they may be known from the relation of the Patient, and those about him; if the Causes be inward, you'll find 'em out by the Humour that is voided. That it is *Idiopathick*, or that the fault lies only in the Guts and Stomach you may be sure, if the other parts are well and there is no Distemper besides: And, that it is *Sympathick*, you know if it comes upon another Distemper, as a Fever, Inflammation, &c.

As for the *Prognosis*, this is one of the most acute Distempers, terminating commonly in a few days, and sometimes killing the Patient in twenty four hours; yet if it proceeds from things taken, so they be not venomous, it is not so dangerous; as also if the strength keeps up there is more hope of recovery: If there be Faintings, coldness of the Extremity, Hippocratick looks, and other grievous Symptoms, the Patient is gone: *Hypocr.* says, that *Cholera's* sometimes are *Critical*, especially if they come in Fevers, call'd *Lypirie*; but truly such *Crises* ought to be much suspected, because they are made with too great an agitation of the Body and the *Viscera*.

The cure of this Distemper, if caused by Poysons, or violent Medicines, is, after bleeding, perform'd by intangling Medicines, fat Broths, Milk, Lye made of Twigs, Oyl, &c. injecting at the same time Anodine, that is, appeasing Glysters: Mean while bleeding must be used, for fear that a Fluxion or Inflammation might follow.

But

But if it proceeds from *Victuals*, that are crude and unfit for *Concoction*, or from a bilious Humour, then the Vomiting and Stools are not to be stop'd presently, as your *Empyricks* do; that the peccant Matter be not detained in the Body; but the Evacuations upward and downward are to go before, and to be encouraged with often and copiously giving the Patient luke-warm water: for Physicians, now adays, serve this Distemper as they would a Fire, broke out any where: Some Oil or Butter may be added to the Water, to make it more efficacious; yet it is better to bleed first, once or twice; for the Blood being cool'd by it, the Spirits are more disposed to rest. Lenitive and cleansing Glisters are also of use at that time, and to be made either of Milk with Yelks of Eggs, or a Decoction of Barley, Agrimony, Lettice, Violets, with Raisins, Licorice, and Roses, with Cassia, lenitive Electuary, or the Electuary of Catholicon, with a double quantity of Rhubarb and Honey of Roses.

When the load of bad Humours shall be sufficiently thrown out, then the Vomiting and Stools, which spend the Patient, must be refrain'd, either with Vinegar Posset, tart Broths given in small Doses, that they may not come up again, or Juleps of an astringent Decoction made of Milk, Sorrel, Plantain Leaves, adding Syrup of Quinces or Roses, with some drops of the Spirits of Sulphur, Salt, or Vitriol, or some Juice of Limons, Pomgranates, &c.

Narcoticks also are not to be rejected; as Syrup of white Poppies, Syrup of water Lillies, Laudanum, Venice Treacle newly made; which, as *Riverius* witnesses, stops in a moment those vehement Evacuations; but, whilst on one side the Vomiting is restrain'd, the Stools ought also to be curb'd on the other, by Glisters of the decoction of Sheeps Guts, or Milk with Barley Broth, or a decoction of Roots of Marshmallows, the Leaves of Mallows, Sorrel, Purslain, Lettice, Line and Fennel-seeds, Camomile and Melilote Flowers; add to it the mucilage of the Seeds of Flea-bane and Quinces, made with Rose-water; or likewise some Grains of Laudanum: After the Injection of these Glisters, you must come to astringents; Vinegar Posset, a Decoction of the Roots of Snake-weed, or Cinquefoil, Plantain Leaves, Shepherds Purse, Knot-grass, Wool-blade, Roses, the Flowers

Flowers of Pomgranates with Barley and Bran, the Catholicon with a double quantity of Rhubarb and Honey of Roses. The Jesuits Bark, given in a Bolus of some Conserve, not to trouble the Stomach, is much recommended in this Distemper to restrain the Vomiting and Stools. The Mineral Waters are likewise proper after the use of the other things; as also the cold Bath; in the mean time, because the Strength and Stomach grow weak, something must be done to revive the Patient. Confection of Alkermes, Syrup of Wormwood, the Opiat of Salomon, Venice Treacle, and Preserved Nutmegs are convenient. Purging seems to be of no use in this Distemper; yet, if after the Symptoms are abated, to take away the rest of the morbidick Matter, it be required, let the Patient be Purged with a Bolus of the Pulpe of Cassia, Tamarinds, Rhubarb, and Myrobolans powder'd, with Syrup of Wormwood, or Succory with Rhubarb.

If the *Cholera* be *Symphick*, and depends upon Fevers, they ought to be taken care of by their proper Remedies, when the Vomiting, and Stools, as the most urgent Symptoms, are stop't.

There is a Question among Practitioners, Whether the Patient ought to Bleed in the very attack of the Distemper, or to stay till the Symptoms begin to abate?

#### N O T E.

' In the *Cholera*, Dr. Sydenham chiefly recommends,  
' after Bleeding, large Draughts of thin Chicken Broth,  
' with Syrup of Water-Lillies; and the same Medicine  
' for Glysters, to be often injected: For by this the  
' Acrimony of the Humours that raise the Disturbance,  
' is blunted and diluted, in order to subdue them afterwards  
' more easily with Specificks. Among the Specificks  
' are Crystal prepared, and most all Bezoartick  
' Powders, Crabs Eyes, Coral, Pearl, the Mineral, and  
' Animal Bezoartick, Emaraulds, Seal-Earth, Dragons  
' Blood, Bole Armoniack; all which will be of greater  
' Efficacy, if they are first impregnated with the Spirit of  
' Sal-Armoniack, than dried again. It is also of use to  
' anoint the *Abdomen* with good store of Oil of Camomile,  
' or white Lillies; as also our green Balsam, made



of an Infusion of various Aromatick Plants, in Oil of Olives: Covering the Belly afterwards with a Sheep's Caul; they make use likewise of Fomentations of emollient and Aromatick Plants, boil'd in Milk: The Region of the Stomach being anointed besides with Venice Treacle, as also with Diascordium, mix'd with Balsam of Peru, and Oil of Nutmeg by expression.

## C H A P. VIII.

*Of Vomiting of Blood.*

SInce the Vomiting of Blood is rais'd the same way, as that of all other Humours, I shall not explain its Nature, but only its Causes and Cure, in which it differs from other Vomiting. I shall only say, that either by its quantity, or bilious Particles that are mix'd with it; or lastly, by its own Corruption and Acrimony, contracted by staying in the Stomach, the Spirit is able to incite its Hosts, the Spirit of the Stomach, to convulsive Motions. Such an Ejection of the Blood by Vomiting the Ancients deduce, as they do all other Hemorrhagys, from the opening of the Blood-Vessels by Rupture, *Anastomosis*, Erosion, or Transsudation; but, if we consider rightly, the Transsudation ought to be quite rejected, the consistency of the Blood being too thick. The *Anastomosis*, or opening of the Vessels happens, when the Blood is much rarified, dissolv'd, or thin; for then it may open the extremities of the Vessels, or at least by its thinness slip through, as we see in ardent and malignant Fevers, where the Blood is ejected through the Nostrils, the *Menstrua*, and other Passages; and in the Purples, Measles, and small Pox, in which the Blood very much attenuated, jumps out of the Vessels and is diffused through the Flesh.

A Rupture is caused three several ways; either when the Vessels are too empty, by a strain or blow; or else when the Blood swells the Vessels too much.

An Erosion is occasion'd, when the Blood being too sharp, or its *Serum* too Salt, eats through the Tunicks of the Vessels, as we see in the Pryck, a Salt and *serine* Ca-

Catarrhe, and other internal Ulcers that proceed from a Salt Constitution of the Humours.

Of these a Rupture and Erosion are the most frequent Causes of the Vomiting of Blood, and proceed, either from great Straining, occasioned by Emeticks or a great Contusion, Blow upon, or Wound in the Stomach; from Poysons or sharp things taken; for loud skreaming and bawling would rather produce the Spitting of Blood. Lastly, from the fullness of the Vessels, occasion'd by the suppression of the *Menstrua*, or Piles, or the Blood's swelling in the Vessels by a Fever or Exercise, a Blood Vessel may chance to burst or open in the Stomach; especially if there be that disposition, which in some through the Nostrils, others through the Throat, &c. at last the Spittle, or *Succus Pancreaticus* being grown sharp or corroding may be the cause of it; but, whether this Blood comes from the Milt, Liver, Brain, or elsewhere, we have no reason to enquire, as *Riverius* does to no purpose: For, as long as we believe the Circulation of the Blood, it can be sent from no place but the Heart.

This Distemper is soon enough known by it self, and its Causes are learn'd from the Relation of the Patient, or those about him, of what has happen'd before. So that it is occasion'd either by Poyson taken, a Blow, Contusion, Wound, Exercise, excessive Fermentation of the Blood, Suppression of the *Menstrua*, &c. or else the fault lies in the Acrimony of the Humour, corroding the Tunicks and Vessels of the Stomach. The Vomiting of Blood is sufficiently to be distinguish'd from the Spitting of it, that in the latter the Blood is brought up by Hawking and Coughing; and in the former by Vomiting and turning of the Stomach.

As for the *Pregnotis*, no Vomiting of Blood is without danger; especially, because as *Hypocrates* says of the Spitting of Blood, *to void Blood upward is a bad Sign.* The bigger the Vessel be that is broke, and the more Blood there is thrown up, the greater the danger; the Rupture of an Artery is more dangerous, than that of a Vein.

But, if the Distemper proceeds from a Suppression of the *Menstrua*, it is not so dangerous; as it is observed,

for it is easily stopt when they flow again. An Effusion of Blood into the Stomach is always to be counted dangerous; for sudden Death insues; either, when by clodding or putrifying, it produces Faintings and Swoundings, or a Dropsy, which is Fatal; as it is after all great Hemorrhagys.

The Cure is perform'd, first by all things that cause a Revulsion of the Blood from the Stomach; such as Bleeding in the Arms once or twice repeated, the same else in the Feet; which shall be often repeated, if it proceeds from a swelling of the Humours, or fullness of the Vessels. Secondly, are to be used those things, that are able to conglutinate a Vessel that's broke; for what is the most urgent is to be minded first; and here Medicines of Vinegar, Rose, and Plantain-Water are proper; a Decoction of Wall-wort, Milfoil, the Pomgranates, the Flowers of the same, the Juices of Plantain Leaves, Milfoil and Nettles, in some cooling Veal Broth, with Purslain, Sorrel, Troches of Bole-Armoniack, Seal'd Earth, Karabe, to make an astringent Julep, add Syrup of dry Roses, Quinces, Myrtles; the Syrup and Tincture of Coral are very good; in the mean time moderate purging Glysters are to be injected.

Let your Diet be astringent; as Almonds, Rice, Jellies, adding Starch made without Lime, Kids and Calves Feet and Entrails, Veal. Let the Patient eat sparingly, and shun all things that are sharp and salt, likewise Wine; let his ordinary Drink be a Decoction of Wallwort Roots, Plantain Leaves, Milfoil, with some Barley:

Tart and astringent Fruits may be also repeated, as Pomgranates, the Pulp of Sorb Apples, Medlars, sower Cherries, &c. all which are very astringent; but care must be taken of giving any thing in a quantity, that might offend the Stomach.

After this, if the broken Vessel be consolidated again, you must come to purging; but so gently, that it moves the Stomach but little; with Tamarinds, Cassia, Rhubarb, in Substance and Myrobolans, either in a Bolus, or a Potion of a very small quantity, of an astringent and cockling Decoction; this Purge must be given in a small Dose often repeated, corroborating the Stomach after every

every Purge with Confection of Hyacinth, or some Conserve.

If the suppression of the *Menstrua* has been the occasion of this Distemper, use aperient Chalybeats; if Poyson, use Milk, things oily and fat, Lye of Twigs, &c. If the Cause was an immoderate Fermentation, prescribe cooling and acid Remedies; if a Catarrhe and sharp Humours were the occasion, use softning and appeasing Medicines; as Bathes, Milk, and other things that temper the Humours.

## NOTE.

In Vomiting of Blood the Juices of Plantain Leaves, Purslain, Nettles, and the Decoction, or only Infusion of the Roots of the latter are counted Specificks. Syrup made of Plantain Juice, and the Roots of Comfrey, as also Nettle-water sharpen'd with a little Spirit of Vitriol, are likewise of great Efficacy. To these you may add what has been reckon'd among the Specificks in the Chapter of the *Cholera*, except only one thing, which in the Vomiting of Blood is not so proper, and that is the impregnation of the Alkaline Medicines in Spirit of Sal-Armoniack, set down there.

## CHAP. IX.

*Of Vomiting.*

**T**Hat the Stomach is the source of the greatest part of the Distempers that infest Mankind, is proved by several Proverbs, implying, that Eating and Drinking kills more than the Sword.

This is confirm'd by Reason joyn'd with Experience. If by any fault of the Ferment unfit for Concoction, or the disorder'd or preternatural Disposition of the Organ of Chylification, the Aliment taken to repair the loss of substance by the Body sustain'd, be not well digested, retain'd, and excluded, all which belongs to the Stomach, (since no fault of the first Coction is mended in the second) it is impossible, but that it should many ways encourage



the production of several Diseases, and divers Alterations of the Blood: So that it would not be improper to say, that innumerable Calamities spring from the Stomach, as formerly from the *Trojan Horse*. To run over here the various Distempers that are used to disturb the Concoction of the Aliment and its Exclusion, by Nature intended through the *Pylorus*; as it would require great labour, so it would be against our purpose; which is only to inquire in that Distemper which is wont to disturb the retention and exclusion, I mean Vomiting, a Disease common almost to all People, and a Companion of many.

But, as the Definition ought to begin a Disputation, so I shall commence with it; that whatever I shall say hereafter of the Distemper, or its Causes, may appear the sooner, and be understood the better, Vomiting I call a *strong and sudden Contraction of the whole Stomach, occasion'd, because in its orbicular, as well as oblong Fibres, the animal Spirits are preternaturally expanded, and too quick and violent in exerting their elastick Power*: Or, to say better, it is a *Convulsive motion of the Stomach, by which, all the Fibres that compose its middle or muscular Tunick, being once strongly pull'd, it strives to throw up, through the Oesophagus and Mouth, whatever is contain'd in its Cavity*. For the better understanding of which Definition, I ought here to delineate the natural Constitution or Structure of the Stomach; and to make a particular Treatise of the Muscular and Convulsive Motion: But, because that would be, as they say, Writing the *Iliads* after *Homer*, it being already accurately done by *Dr. Willis*, and that it would swell our Work beyond the limits we design it, I shall think it sufficient to say, that the contrary motion of the Stomach depends not upon the outward Membrane of the Stomach, nor the internal, which is nervous, but only on its middle Tunick, which is fleshy, and has two rows of Fibres; one, where the Fibres, which the first Membrane being removed, presently appears; are so disposed, that they like so many Rings, gird the Stomach from top to bottom; these are pretty numerous, and Purse-like, draw its Cavity together from the inmost to the outmost side; where they, as it were, end into a Tendon. The other Row lies under this, and here

here the Fibres, that have regard to the inward Membrane of the Stomach; run in oblique lines from the upper and left part of the Stomach, where they are thinner and more tendinous to the lower and right part, where they are thicker and more fleshy; crossing the Annular Fibres not in right, but unequal Angles. And here it is very Remarkable, that the Fibres of the outward part of the Stomach, that are carried directly from one Orifice to the other are not of an Order distinct from the other, nor differ so from them, so as to make a distinct set; as some have thought; but that having the same beginnings with them, they run along the top of the Stomach, whilst the other successively decline lower; so that, concurring with the same Fibres in the drawing together, they are able to pull to them at once the two Orifices of the Stomach, and the parts remotest from them, and so together with the Annular Fibres lessen the capacity of the Stomach.

That all these Fibres are fill'd with Spirits furnish'd by the *par vagum*, which first with four, and afterwards more Branches ends in this Entrail, as its utmost bounds; as also by the *plexus stomachicus*, derived from the *plexus intercostalis*, in the same manner as in all Muscles, no body doubts now a days: I say, that these Fibres are drawn together sometimes slowly and successively; as naturally they should; and sometimes a little faster with more violence, as they are in Purging: And lastly, sometimes all together, and very violently: And this last Motion is that, in which I have abundance of reason to think, that Vomiting consists: Tho' some ascribe the throwing up of the Contents of the Stomach to the Contraction of the Fibres, that are upon the ridge of the Stomach, and run from one Orifice to the other, in (as some think) two different sets; as if the said Fibres in that part, where they are nearest to the *Oesophagus*, provoked by the sharp Steam, exhaled from the matter contained in the Stomach, forcibly drew the *Pylorus* toward the right Orifice; and in the same manner they fancy, that the Fibres near the *Pylorus* provoked by the same cause, by strongly pulling the left Orifice toward the right, are able to produce Stools. Yet, if we consider the thing more accurately, we shall find, that the Contraction of the said Fibres is

not sufficient to raise Vomiting and Stools: To say nothing of the equal mobility of each Orifice; which makes it impossible, that either of them should be drawn toward the other: For all muscular Motions tend towards the unmoveable part. What pray can this Abbreviation of the said Fibres drawing one another produce else; but that both Orifices of the Stomach should meet? From which Motion if we mind the Figure of the Stomach, it is impossible, that either the upward or downward Expulsion of the Contents should be deduced; unless you say, that in this action, conspire the Contraction both of the Annular Fibres, and those that be under them: Not that Contraction, which proceeding from the irritation of the upper or lower, right, or left part is able to draw one part of the Stomach to the other, as *Willis* would have it; but that which, depending upon the Spirits of the whole Muscular Tunick more or less, faster or slower expanded by the *Heterogeneous* mixture, can streighten the Cavity of the Stomach to various degrees of Violence and Celerity. Besides, that Vomiting, nor Stools proceed from this irritation made in different places of the Stomach, is manifest by the Figure and Position of the Stomach and its Orifice; for the bottom of this Entrail, exactly representing the figure of a Bow, or Semi-circle, is as distant from the *Pylorus*, as it is from the *Oesophagus*; and therefore may, when it is stimulated to a Contraction, exclude its contents as well one way as the other. Moreover, that both Orifices, and the Muscular Fibres running from one to the other, are usually expos'd to the sharp Vapours, exhaled from the Contents of the Stomach; wherefore the Fibres toward the *Pylorus* are not more troubled with them, than those near the *Oesophagus*, and consequently the Propulsion of the Matter must be made toward no other part, or else toward both parts at once, which is absurd.

No less have they err'd, that in Purging Medicines have imagin'd a Sulphur and fix'd Salt, which when they could not be sublineated to the upper Orifice, led the Humours downward. And in Emeticks a Sulphur and Volatile Salt, which, by their lightness and subtilty carry'd upwards, caused the Contents of the Stomach to be excluded through the *Oesophagus* and Mouth. But, be-  
cause

cause these are mere imaginations, we shall spend no time in refuting of them.

Those reason much alike who compare Vomits to Gun-Powder, whose strength lies in blowing upward; and Purges to the *aurum fulminans* of the Chymists, the force of which works downward: But all these things are overthrown, if we regard the said fire of the Stomach and its Orifices; and attentively consider, what we have deduced from thence. There is little need of refuting what some Chymists fancy about Vomiting, who think it is occasion'd, as often, as the Humours, or what we have taken, ferment in the Stomach, to such a degree, that by the excessive Motion of Expansion, which they undergo, they are forced upward in the same manner, as various Chymical Liquors in a Glass too much agitated by Fermentation, rise commonly up to the top: For besides that it's not credible, that so violent a Fermentation can be rais'd in us, this would require no Coarctation of the Stomach, nay the same would be rather hinder'd by it; and so the Stomach could never be quite emptied, which is against Reason and Experience.

It remains then to clear up and explain that Hypothesis of Vomiting; which, as being the likeliest, I think ought to be preferr'd to all others: This makes the cause of Vomiting differ from that of Stools; by being a sudden and strong Constriction, and drawing together of all the Muscular Fibres of the Stomach at once: Whilst Stools, as well those, that are Natural; as those, that are promoted by Purges, are occasion'd by the same Fibres not violently, but gently; not suddenly, but slowly, and successively drawn together, more or less, according to the quantity of the contents of the Stomach, or the copiousness, and motion of the Spirits. To which Opinion I am perswaded by more than one Reason, that make it appear, that what is to be excluded through the *Oesophagus* and Mouth, to which it must ascend, wants a very great Propulsion, and consequently a very strong Contraction of the Stomach; of which the *Oesophagus*, to concur in this action, ought likewise to bear a share, as being of a piece with the Stomach, and a structure not unlike it. The same is confirm'd by Experience, and every one that is Vomiting, may feel in himself those  
strong



strong convulsive motions of the Stomach, to which the Muscles of the Belly contribute not a little: But whence this intimate Correspondence of the Muscles of the Belly proceeds; that, as soon as one feels a Convulsion, the other presently are brought to the same Motions, is a Mystery, not so easily discover'd. For the various Communion of the Nervous beginnings, belonging to various parts; on which the Sympathy of the Breasts with the Uterus, of the Eyes with the Privy-parts, and of the swelling Membrane with the Midriff and the *Musculi intercostales* depends; has neither been shewn yet by Anatomy, nor explain'd by Reason: Unless by a dubious Conjecture we will say; that those Nerves in their Origin, and when the Body is yet in a callous state, have a mutual correspondence; by reason of which, when a Convulsion is felt in either part, the irritated Spirits run in a great quantity, in one part as well as the other, and that thus the motion is soon carried from one part to the other.

If one should ask why the Stomach, being violently drawn together, should force the Contents rather through the *Oesophagus* than the *Pylorus*; when as we have said already, the distance and height from the bottom to either Orifice are the same; I answer, that the entrance into the first is more open, direct, and easy, than it is in the latter; because the *Oesophagus* ends into the Stomach perpendicularly, but the Stomach ends into the *Pylorus* by an indirect and crooked way; it is more open, because, besides the width, in which the left Orifice exceeds the right, there is in the latter a great *Valvula*, or fold of the inner Membrane; which obstructs the Passage, and suffers nothing of what is in the Stomach to go through, but what has been well attenuated.

Lastly, it is more easy; because the Fibres near the *Pylorus*, where they are thicker and more Fleishy, are more expanded, than any where else, and so partly by the swelling of the *Pylorus* they streighten its Canal more; and partly by the strong Contraction of the matter, contained in the Stomach (the Stomach being more coarctated here, than in other parts) force the Expulsion toward the left, and the *Oesophagus*: To all which add, that the muscular Tunick of the *Oesophagus*, by its nearness, continuity, and communion of Nerves, suffers successively all the way

up an *Antiperistaltick* motion, such as happens in the Gut, call'd the *Ileum*; the Spirits residing there being brought to the same Motions.

To have a full and intire History of Vomiting, of which we treat, we ought not to pass over the differences, which are made in it. Vomiting then happens either without a shew of Illness when it is done, as it were, with a voluntary Motion; as some by putting a Finger in their Throats, or looking on things that are Nasty and Loathing, throw up what they have in their Stomachs at pleasure; or it is joined with a distemper'd Constitution; as we see in many Distempers, that are used to produce Vomiting. Vomiting is either Natural, when it is performed by the Benefice of Nature, striving to throw off what offends it; or Artificial: When Nature does it provoked by Medicines, furnish'd by Art; natural Vomiting is either Critical; which because of the evacuation of the Morbifick matter, is follow'd by an intire solution, or at least a great diminution of the Distemper; or it is Symptomatick, which is always hurtful to the Patient; because the greatest fault, betraying it self in the Stomach, lies hid in the Spirits and Humours; or, because it is kept up by the continual presence of the Humour, or Cause, that makes the Distemper: Whence a great loss of Strength, and considerable disturbance in the first Concoction, on which the Functions of the whole Body radically depend, must necessarily follow. The differences of Vomiting as to the things voided, from which it is call'd; either Chylous, Bloody, Mattery, Serous, or Bilious, I shall not touch here; they being of very little Moment, to find out the nature of Vomiting, and easily known of themselves.

But among all the other distinctions, not to forget the principal. I shall divide it in *Idropathick*, and *Sympathick*. *Idropathick* it is called, when it proceeds from a fault, that is in the Stomach; and *Sympathick*, when it depends upon distempers of other parts, as the Head, Kidneys, Midriff, Liver, Milt, Guts, Womb, &c. In the first, the Stomach suffers by its own fault, and we are to look for the cause nowhere but in the Stomach it self: But in the other the Stomach suffers for the faults of other parts, that labour under some ill disposition.

It is not difficult to find the immediate cause of Vomiting; if we mind what is said before: *viz.* That this violent drawing together, which is a Convulsive, and consequently a muscular Motion, proceeds only from the Spirits, when they are too much expanded in their fleshy Fibres, the same as in Muscles that have the Cramp: But how these external and internal Causes, which are many, are able to stir up that immediate Cause to Action, there lies the difficulty; for abundance of them seem to have little or no respect to the Stomach.

To begin then with Vomits, which Chymistry furnishes us with from Minerals; as Antimony, Vitriol, Mercury, and Arsenick, of which some are stronger and more dangerous than other some. They seem to me to produce Vomiting no other way, than as by a certain combination and quantity of Sulphur and Salt, not much fix'd, whilst by the heat of the Stomach they are dissolv'd, attenuated and stirr'd, they penetrate the nervous Tunick of the Stomach every where, by the tenuity and sharpness which they have from the Salt; in which Tunick they make a slight or considerable irritation, according to the greater or lesser Acrimony of the Emetick; and a little after, joining with the Spirits, contained in the middle or muscular Membrane, by their excessive Motion, or because of their different Nature, which is the Reason why they cannot easily be mix'd with them, augment and pervert their natural Expulsion; so that the Squeezing, which used to be performed by degrees, and successively in the Orbicular and Oblong Fibres of the Stomach, is now made suddenly and vehemently in the whole muscular Tunick; from whence the upward ejection must necessarily follow.

But whilst I affirm, that volatile Sulphur is an apt Cause to excite Vomiting, when combin'd with Salt; I would not be understood; as if the Sulphur always must be predominant over the Salt; but, that the Salt may sometimes exceed the Sulphur; as in the Salt of Vitriol, or the *Mercurius Sublimatus Corrosivus*; of which half a Grain mix'd with a great deal of Water, potentially provokes Vomiting; yet so, that neither the excessive Quantity of Sulphur obscures, and intangles the Salt; nor the abundance of Salt does the same to the Sulphur:

For

For by this the Emetick Power would be very much diminished : So we see ; that both crude Antimony and its *Hepar* or *Crocus metallorum*, made with a greater quantity of Salt Petre, are of less force to provoke vomiting ; the one, because of its predominant Sulphur, which by Calcination or Denotation ought to have flown away : The other, because of the excessive quantity of Salt, fixing and involving the Sulphur, that is left in the Antimony.

What we have said of Antimony, and other Minerals is to be understood also of Folefoot, White Hellebore, the greater and lesser Cataputia, Elder, Gambouge, Broom, Elaterium, the Juice of Rayfort, Tobacco, tho' with some disparity ; for tho' it appears not by their inward composition, yet we have room left to suspect, that the Sulphur and Salt, which in all these Vegetables give the sharp taste, so far exceed the other Principles they are united with, that swallowed down they are able to produce Vomiting this way ; tho' often sharper Plants, for want of that proportion, cannot do the same. For, that volatile Sulphur, joined with Salt to a certain proportion, is able by a preternatural motion given to the Spirits, to produce a very violent Constriction of the Stomach, is shewn by one example to prove the rest ; and that is the bilious Humour, that owes its Emetick Power, which it has very great, to these two Principles.

The same is shewn by fat things, which are Sulphur involving an Acid, and very apt to promote a convulsive motion in the Stomach ; especially then, when stir'd by the Heat and more disposed for Motion, they are swallowed down.

The same is shewn by the Correction and Castigation of all Emeticks, perform'd by Acid Liquors, that bind and fix the Sulphur. Lastly, its shewn, both by the simple Tincture of Antimony ; which, because of its solution of almost only Sulphur, that has not Salt enough mixt with it, is unable to provoke Vomiting, and its other preparation Diaphoretick Antimony ; which, having nothing but a little fix'd Sulphur, is only able, by various Circulations in the Body, to promote Transpiration or Sweating. One cause of Vomiting among the rest has been very tiresome to Physicians, and this is luke-warm  
water



water; for here is neither Sulphur, nor Salt, at least none that is observable by the Taste, from which yet the Emetick Power is commonly desumed; some ascribe its Emetick Faculty to the great Quantities that are given of it: Yet this alone seems not sufficient to produce that Effect; because the same, nay a greater Quantity of cold Water is not so much as nauseous, which it would, if the Quantity was the Cause.

Whence then we can deduce this Energy of luke warm Water to invert the Stomach, I do not see; unless it be from the Nitre of the Water; which, that it is there, if our Senses discover it not, our Reason demonstrates; for by that we know, that it is the Nitre which keeps the Fishes alive, as that of the Air does the other Animals. For this Nitre (which in cold Water is idle, without motion; and in that which is too hot) very little, because of the great Evaporation, has in luke-warm Water its due motion and quantity; by reason of which it is able not only by its thinness to insinuate it self in the Fibres of the Stomach; but also, augmenting the Elartick Power of the Blood, to which it comes very near, to expand the Spirits preternaturally. It is probable also, that the Nitre of the Air, as well as that of the Water, produces Vomiting, viz. that which is provoked by a Finger put in the Throat; for tho' the Finger, touching the sensible Fibres of the *Oesophagus*, might raise some disorderly motions in the Spirits, that are there; yet it could not, at least of it self, make so great a Contraction of the Stomach, as Vomiting requires (or else all dry and solid Victuals; which often make a greater Pression upon the *Oesophagus*, than a Finger; must provoke Vomiting) unless it was assisted by the nitrous parts of the Air, that by the immission of the Finger into the *Oesophagus* gets in its Canal, nay down into the very Stomach, where they are not use to come; and so enter the muscular Tunick of both, like so many little moving Needles; where, being mix'd with the Spirits, they trouble and expand them with their Elastick Power; from whence that strong coarction of the Stomach follows. It's certainly not without a Cause, that in the raising of Vomiting we accuse those nitrous Parts of the Air, and luke-warm Water; for, besides Experience, by which we all know, that the  
same

same Parts, striking the inner Tunick of our Nostrils, cause Sneezing, if the Face be turn'd to the Sun; I am also of Opinion that that part of the Blood, which contributes no less than the Animal Spirits to the Muscular Motion (as it is evident in a Palsy, presently following the Tying of an Artery or Nerve) is for the greater part Nitrous, and drawn from the Air by Inspiration. Which Opinion to back with Reason, let us mind a little the Motion of the Heart; how after the Heart is pull'd out, it perseveres in the Air; and how the same Motion, when it is grown weak, and almost lost in an Animal, the Breast being open'd is suddenly restored, by the copious Arrival of the Air, blown into the Lungs; which ought only to be imputed to the *Nitro-aerial* Particles, mediately or immediately striking the Heart. We may observe also; that the Emetick Force of Antimonial Medicines, with which they Augment the Motion of the Spirits in the Stomach, as well in the *Regulus* of Antimony, both Simple and Martial, as the Sulphur and Flowers of the same, nay even in the *Crocus Metallorum*, depends principally upon the Nitre, that is mix'd with these Preparations.

A Violent Cough, as *Sylvius* Notes, sometimes produces Vomiting; the Reason is this, when there is a strong Contraction of the Muscles of the Belly, squeezing the Guts and Stomach, to which from the other side comes a violent drawing in at the same time of the Ribs, especially the lower Ones, that lie upon the Right and Left side of the Stomach; the Cavity of it by the strong Pression of both must needs be straiten'd suddenly, and so the Contents be thrown up; especially if there be a great quantity in the Stomach. Besides that, by this violence done to the Stomach, the Spirits in its muscular Membrane are put into a greater Motion; or some vitious Humour, lodging in the Cavity of the Stomach, by being mix'd with the Spirits, is excited to action. Immoderate eating or drinking, especially of spirituous things; as Wine, Beer, and hot Liquors, are also used to create Vomiting: And this they do; not only by their quantity by which molesting the Stomach, and preternaturally infecting its Fibres, they are able to draw the Spirits to this place; and to promote a very quick Reduction of the

the Fibres, like that of a Spring too, may beyond their former State; but also by the *Elastick Effluvia*; copiously raised from the excessive Quantity of things taken, or by the *Sulphureo-Saline* Particles, sufficiently administer'd by the Wine, Brandy, and other hot Liquors; which, when they come to the Spirits dispensed in the Stomach, hurry them into preternatural Motions; from whence a great Contraction of the Muscular Fibres, and consequently a Diminution of the Cavity of the Stomach every where must follow. Experience teaches us, that a blow upon the Head may invert the Motion of the Stomach, as well as the Causes aforesaid, insomuch, that the Surgeons now deduce from Vomiting, in Wounds of the Head, a Fracture of the Skull, as one of its peculiar Signs; and an indication of Trepanning. Which inversion of the Peristaltick Motion is only to be imputed to the disorder; that, from the Spirits lodged in the Brain, is communicated to those, that serve this Entrail; and the Motion of the Blow from the Head easily continued to the Stomach; which Passage is more direct open and manifold than any other: Which yet is help'd either by bad Humours still'd into the Stomach by the sudden Commotion of the whole Body from the Blow: Or a parcel of Humours always more or less stagnating in that place, which mov'd upon the least occasion, and joyn'd with the Spirits, come in Play.

Sailing and turning round of the Body, are used to create a Convulsion in the Stomach, much for the same Reason, for whilst both, by various Objects, successively brought before the Eyes, and many rays of the sight reflected from them, and Spirits hitting in Shoals the Membrane call'd the *Retina*: And consequently communicating their disorder to the Spirits in the Brain, very much disturb the middle part of the Brain; or, whilst the Spirits, naturally used to display their Force in the Head, where they reside as in their proper Court, are thus by the continual turning of the Body more and more provok'd and incens'd, this Motion originally made in the Brain is easily transferred to the Stomach, that has more and larger Nerves, than any other part; upon which, the aforesaid Humours always resting

in the Stomach being call'd in for assistance, Vomiting must follow at last.

That Imagination, as well as other Causes, may produce Vomiting, is witness'd by the sight of nasty and loathed things; nay, even the remembrance of them is able to do the same. To explain which, we must have recourse to the Perception, or Thought resulting from such a sight or remembrance in the Soul. For how much, because of the correspondence between Soul and Body by God establish'd, the various Motions of the Body are excited by the various Thoughts of the Soul; and how often diverse Perceptions of the Soul are caused by diverse Impressions made in the Body, is evident, by the alterations of the Pulse, Face, Eyes, and Limbs, produced from the various motions of the Soul; tho' how, and by what mechanick operations it is done is unknown. This convulsive Motion then of the Stomach is created by the sight, or remembrance of nasty and loathed things, and consequently the Perception, that is made of 'em in the Soul; because the Soul usually refers these objects to the Organ of Taste, and the Stomach; and therefore the same influx and motions of the Spirits must be made in those parts; as if such loathsome and unpleasant things really were tasted and swallowed; and how great and disorderly they are in such a case, is very well known by frequent experience. But if any one should think, that we lay the cause of such Vomiting undeservedly upon the Perception of the Soul, let him examine the Brutes of all sorts and species, which, as being destitute of thought, never have been seen to Vomit at the sight of things, tho' never so loathsome or unpleasant.

But not to talk altogether of external Causes, I shall go over to those, that, hid within the Body, are used to deprave the Motion of the Stomach; and to begin with those that cause Vomiting by a *Consensus*, or that which comes upon the Stomach, by the fault of other parts; first of all the Nephritick and Cholick Pains are said to raise this Distemper; the reason of it is, that the motion of the Spirits, augmented by the pain in the Guts, *Plexus Mesenterici*, or Kidneys, may easily be extended to the Stomach, and there raise the same tumult; for the Guts, because of the *continuity* of all their Tunicks with the



Stomach; with which they make but one Pipe, have moreover nervous Branches from the *Plexus Mesenterici*, that have a very near correspondence with one another: Of these the *Plexus lienaris*, or *Stomachical* is one, which sends many Branches as well to the Stomach as to the Milt, of which some reach to the bottom of the Stomach, others run by its left side, and are join'd by *Anastomosis* to some of the *Par vagum*, that descend in this part, and others running to the Kidneys, belonging to the *Plexus Renalis*. Wherefore it is no wonder if the disorder of the Spirits, from all these parts affected, runs to the Organ of the first Concoction, which is so near them; and where, blowing the Fibres up by an extraordinary expansion, they straiten its cavity of all sides. Inflammations of the Liver, and especially that which comes near its concave part, of the Milt, the Midriff, and other neighbouring parts may have the same effect, as commonly it is seen: and that not only occasion'd by the effluvia, or *Sulphureo Saline* Particles from the inflamed part falling to, and penetrating the Tunicks of the Stomach: but also by the quantity of bilious parts in the Mass of Blood, augmented by the Inflammation and Fever; and their being thrown up into the Membranes of the Stomach through the gastrick Arteries: all which how efficacious they are, in provoking Vomiting, may be sufficiently gather'd from what has been said.

The Vomiting that commonly attends the small Pox, malignant Fevers, and other Distempers, ought to be imputed to a fault of the Spirits, mix'd with Particles of a contrary Nature, or to a bad disposition of the Blood, peccant in its temperament. For as both Liquors contribute to the muscular motion, so the fault of both or either of them, and not all faults, but particularly that which consists in the mixture of Heterogeneous Humours; as to the Spirits; and in the exaltation of the Salt with the Sulphure, as to the Blood, produces convulsive motions in the Stomach, as it does in many other Muscles of the Body. Obstructions as well of the *Viscera*, as those that insult the cavity of the Guts in the *Ileum*, are accompanied with this violent Symptom of the Stomach; tho' the cause in both is not the same; for in the Fire the Stomach suffers; because neither the excrements nor the  
Gall

Gall it self, flowing through its passages, the *Biliar* and *Cholidochus*, into the *Duodenum*, for the stoppage that hinders it, whatever it is, can be thrust down to the *Anus*; whence it necessarily follows, that the orbicular fibres of the *Guts*, being also stir'd up to convulsive motions by the *Effluvia* exhaled from the *Excrements* and the *Gall*; what cannot be expell'd downward, must successfully be repell'd to the *Stomach*; where, when it comes, it causes the same motions. In the obstructions of the *Milt*, *Liver*, and *Womb*, the cause of the *Vomiting* is chiefly the dross of the *Blood*, which being used to pass through all these searces, is forced, now they are stop'd, to flow back to the mass of *Blood*, and so by various *Circulations* more and more lodged in the *Stomach*; by which afterwards, the motion and expansion of the *Spirits* in this part are not a little increased.

As to the *Vomiting*, which is *Idiopathick*, and takes its rise from the *Stomach's* being afflicted with its peculiar *Diseases*; it proceeds either from a preternatural small swelling upon the *Pylorus*, as *Practitioners* have observed; or the *Cholera*, a disordered concoction, an *Inflammation*, and *Ulcer* of the *Stomach*, or *Worms* that gnaw its *Tunnicks*. To give a reason for all these together, we must say, that the *Animal Spirits* are too much agitated in the aforesaid cases; either by *Vapours* broke forth from *Food* too long retain'd, *Putrified*, or ill digested; or by the *Gall*, or *Blood* running very copiously into the *Duodenum* and *Stomach*; or lastly, by an irritation, excited from the *Aliment* or *Humours* in an inflamed and ulcerated *Stomach*: The reason of all which, with the manner of producing, will be plain to any one that minds what has been said before.

To know *Vomiting* and its external Causes is no *Diagnosis* required: for they are either to be seen, or heard from the relation of the *Patients*, or those about them. But the inward Causes that are able to produce it, are not so easily detected, and therefore to be made evident by their proper Signs. If the *Vomiting* then be *Idiopathick*, that is occasion'd only by a fault of the *Stomach*; the Signs of the *Distemper*, or the Symptoms that commonly attend a *Distemper'd Concoction*, an *Ulcer*, or *Inflammation* of the *Stomach*, a *Cholera*, or *Worms*, will

shew themselves; and if there be a Vomiting without any of these Symptoms, the Body being free from all other Distempers, suspect, that a *Tuberculum* or swelling on the *Pylorus* is the Cause. But if it be *Sympathick*, and that the motion of the Stomach be inverted by a *Consensus*; there will be various Fevers, or the Iliack Passion, the Jaundice, a suppression of the *Menstrua*, or Piles, the Greensickness, the Plague, the Small Pox, Cholick, or *Nephritick* Pains; or lastly, an Inflammation of the Liver, Milt, or adjacent Part: all which have their proper Signs, by which they are distinguish'd, to be found every where in Practical Authors.

Vomiting, as its external, or internal Causes vary, so it is commonly more or less ominous. That, which proceeds from things taken, so they be not poysonous, or too violent, portends little or no danger; the same I say of that which is produced by other external Causes, that which follows upon a great blow upon the Head is more or less dangerous, according to the disorder from whence it flows. But that Vomiting, that takes its rise from internal Causes, whether it be *Idiopathick*, or *Sympathick*, is full, or void of danger, just as the Distemper is that afflicts the Body or Stomach. Therefore Vomiting in a *Cholera*, the Iliack Passion, the Plague, malignant Fevers, Inflammations of the Stomach or adjacent Parts, a swelling on the *Pylorus*, the Gravel, and other grievous Distempers, is to be thought mortal, or at least of a doubtful event; but that which depends upon Obstructions, Cholick, pains of the Guts, swimming of the Head, Jaundice, Green Sickness, is not so dangerous; because the Distempers, on which it follows, are not. Lastly, Vomiting that is *Symptomatick*, and comes often, where little is voided with great straining, that is corrupted, black, fetid, mattery, that is join'd with an increase of the Symptoms, and the loss of strength, is always worse and more dangerous, than that which has other qualities.

To proceed to the Cure we must note, that that Convulsion of the Stomach, which requires Medicines, for all do not, is to be cured two ways; first, mediately, or by curing the Distemper whose Symptoms it is, for the Cause being removed the Effect ceases; secondly, immediately and

and by Remedies, that are used to stop Vomiting, even when it is very violent ; or to assuage it when it is too frequent and dejects the Strength. The first manner of curing Vomiting, not to write an intire History of Diseases, I shall pass by, and only hint, that the proper and select Remedies are to be directed to the Distempers, on which the Vomiting insues ; that afterwards the depraved motion of the Stomach be sooner and easier conquer'd ; therefore the *universalia*, those which are called proper to every one of the aforesaid Distempers in Specie, being taken care of, I shall go over to the Cure, which Vomiting it self requires: First, by prescribing Vomits, if the load of Humours lurks in the first Passages ; for Vomiting is sometimes cured by Vomiting, and a Looseness by a Looseness : And afterwards those things that are able to stop the disorderly and violent motion of the Spirits : such are Bleeding, which if the strength will bear it, and the Distemper requires nothing to the contrary, is to be done in large quantities, or often repeated : For this, by diminishing the mass of Blood, not only takes away part of the matter, design'd to procreate Spirits ; but curbs also the motion of the Vital Spirits, (which are the cause of the Blood's motion) and consequently that of the Animal Spirits:

Cooling Remedies, as drinking of cold Water, Medicines made with Vinegar, Acid Juices and Spirits ; how much they are able to fix the Humours and the Spirits, Experience and Reason can witness. Experience, because Practice teaches us, that an immoderate Fermentation of the Blood is mitigated, and that the Spirits are appeased by Acid and cooling Remedies : And Reason, for as much as cold Medicines, especially such as dilute likewise, by receiving the Motion of the Humours and Spirits, communicate that rest to them, which they enjoy'd ; and by diluting the Fermenting Principles, or the Humours that stir up the Spirits, diminish their activity : And the Acids which consists of long and sharp Particles, by Shooting themselves into the *Globuli* of the Blood, and the branchy parts of the *Lympha*, put a stop to the Fermentation of them, and consequently of the spirituous Liquor, that comes from them ; or correct the emetic Power of the Humours. But Narcoticks in this



Distemper, exceeds all other Remedies, as being able beyond all the rest to bind and intangle the Spirits; such are the Syrups of Water Lillies, Diacodium, of red and white Poppies, and especially Laudanum, of which a Grain or two; I mean that which is in the Dispensatory of *Montpellier*; have often wrought wonders in Convulsions, Deliriums, Frenzies, Madness, and other Distempers, that depend upon a violent and disorderly motion of the Spirits. If it be asked in which its Power of stupefying the Spirits consists; which, after *Dioscorides* and *Galen*, many look for in an imaginary frigidity; others in Vapours, that exhaling from it fills the Brain; others in a fusion of the Blood, produced by it, which drowns the Brain with Humours; and others again in a peculiar and occult quality.

But every one, that is free from prejudices, shall find, that it consists in an Oily, Viscous, Sulphur, that yet is easily dissolved, as it appears in the Opium; which is dissolved in all sorts of *Menstrua*, either Waterish, Spirituous, Salt, Acid, or Oily, without losing the taste. For tho' Opium distill'd through a retort, after a little Phlegma, yields a Urinous volatile Spirit, or one that is fill'd with volatile Salt; which is the reason, why we believe, that by its action it promotes Transpiration and Sweating; yet its Gluish, fix'd, resinous Sulphur is pre-eminent above the rest; and this is in the copious, blackish, and fetid Oil, which after the *Lympha* and Spirit are come over, is drawn from it by the strength of the Fire; this, whilst it goes through the Blood, and is, being easily dissolv'd, diffus'd through its *Serum*, robs it of its Vehicle; and, like fat Liquors injected into a Vein by their branchy and flexible parts, lessens its motions; from whence the Matter of the Animal Spirits being also glued up and captivated, less of them pass through the cortical glands of the Brain: or with them some of the gluish parts of the Opium are strain'd through; that take away their Volatility, and hinder the usual entrance of the *Ætherial* Matter into them: From which without doubt the disorder, if there be any, or the violent Motion must cease. This Narcotick Sulphur of the Opium is used also to work immediately upon the Spirits; since it induces sleep and stupidity before it is gone out of the Stomach: This  
it

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it can only do through the Nerves of the Stomach; which are large and many, whose substance, whilst it penetrates, dissolved through the heat, it binds the Spirits that are contained in them, and successively flow from the Brain; or getting into the gastrick Veins, no otherwise than the thin Particles of Food, which suddenly revive us after they are taken; arrives at the Heart and Brain; where dissolved in the thin *Lympha*, of which the Animal Spirits are made; it either, as is said already, hinders its separation, or goes with it into its nervous Pipes; whence the Spirits grow slow and unactive. Whilst then in Vomiting Laudanum comes in, unalter'd and with all its force to the part affected, (especially if it be given in a small Bolus, that the Stomach be not molested with the quantity of the Remedy) which it doth not in other Distempers, in which it is used; without doubt it may easily lay and appease the violent motion of the Spirits that is there; especially if the load of Humours be brought away from the first Passages, and stupify the sense of the Stomach, that it be not provoked by the Acrimony of the Humours; may by going through the Blood and Brain, curb their disordered influx in the Stomach.

### NOTE.

‘ About Vomiting and its Cure, I shall add nothing to what our Author has Learnedly and Accurately al-  
‘ ledged; and what besides I have set down my self,  
‘ under the Chapters of the *Cholera*, and Vomiting of  
‘ Blood.

## CHAP. X.

*Of the disorder of the Guts, and chiefly the Cholick Pain.*

THO’ the Cholick derives its Name from the Gut  
Colon, which the vulgar of Physicians thinks to be  
chiefly affected in this Distemper; yet I mean by it not  
precisely that pain which torments such a Gut; but that  
also

also which usually invades other Guts, whether they be thin or thick, for one Gut seems not to be more subject than another to this pain, which is call'd the Cholick, since the contexture of all of them is the same every where, and the sharp Humours, or other Causes, that bring the Cholick, may as well fall and be gathered in one Gut as in another: nay I would not think it amiss, if under this Name should be comprehended the Pain that is excited by Humours, that are very powerful in distending and irritating; such as invade the *Plexus*, and Membrane of the *Mesentery*: For as the Blood circulating through the whole Circumference of the Body, can drop its sharp *Serofities*, if it be fill'd with them, in other parts; so it may in these *Plexus*, since the Blood has a passage thither, as well as to other parts of the Body.

And tho' this pain, excited in the nervous *Plexus* of the *Mesentery*, ought not properly be call'd a Cholick pain; because it invades no Gut at all; yet it may deservedly be referr'd to this pain: First, because of the nearness of the affected parts: Secondly, because this pain resembles that of the Cholick so exactly, that the one cannot be distinguished from the other: Lastly, because it most always requires the same method of cure with the Cholick. The Humours in the aforesaid manner falling upon the nervous *Plexus* of the *Mesentery*, are the true and legitimate Cause of obstinate Cholicks; tho' many are of opinion that it lurks in the Tunicks of the Guts, whence it is no wonder, if the distemper be not appeased by common Medicines, upward and downward Administr'd, or if it be not cured so easily, as other less obstinate sorts of Cholick pains: Since the morbid Cause sticks so close in the very substance of the Nerves, Fibres, and Membranes, that it cannot be pull'd out; but by much Trouble or violent Medicines.

Having said thus much before, I define the Cholick to be a sorrowful sensation, or perception of a very sharp pain, infesting the Guts, or the nervous *Plexus*, or Membranes in their neighbourhood, proceeding from a *Solutio continui*; or separation of the whole; I say a *Solutio continui*, because so great a pain is not to be conceived without some violent separation of the Parts or other; for we must reason of internal Parts the same way in proportion, as we do of the external. We

We must say, that the Cholick pain, which is most outrageous, cannot be excited without a *solutio continui*; because the external Parts cannot pain grievously without being separated.

The Causes of this Divulsion or violent Separation are of two sorts, *viz.* internal and external, the internal are chiefly Humours, or *status* arising from putrifying, or fermenting Humours; as also Worms, and other Causes, of which hereafter.

As to the Humours I am no ways of the opinion of the Ancients, who thought that the Cholick pain was produced by a thick viscid Humour; for such qualifications as viscosity and coldness are not in the least apt to produce pain: And, tho' *Galen* tells of himself, that being troubled with the Cholick he voided a great quantity of slime that was actually cold; yet that is no proof that the coldness was the cause of the pain; because with the cold Humours which he voided, others, that were Salt, Acid, Sharp, and caused the pain, might have been mix'd: besides, tho' coldness might produce the Cholick, can we conceive a Humour so cold, as by reason of that, to produce a pain so violent, as that of the Cholick?

Therefore the Humours that cause the Cholick, and sometimes invade the *Plexus* and Membrane of the *Mesentery*, sometimes the Tunicks of the Guts, as we said before, are very often sharp, and act chiefly by vellicating the parts; which is proved by that all things, which cause pain in the external parts of the Body, are either sharp and prickly, or contunding: But Humours cannot act by contusion; because that requires a solid substance, and consequently their action must consist in pricking, provoking, &c. but whence such Humours are derived, is next to be inquired into.

That the Mals of Blood is vitiated many ways is manifest to all: so that, according to the bad use of the fix unnatural things, the Blood sometimes grows very hot, as in Fevers; whilst its Sulphureous parts are exalted, and the Spirits hurl'd in a preternatural motion; and sometimes it is oppress'd and depauperated, wherefore the Spirits and Sulphure, which ought to predominate in the Blood, are oppress'd, and sometimes a sharp, sometimes an Acid Salt obtains the dominion: In the same manner



manner as Wines turn eager and insipid. In this case whilst the Blood is impregnated with too many Salt Particles, and as it were brought to a Flux, whilst it circulates through the circumference of the whole Body; according to what serous Humours, in which the Salts are chiefly dissolv'd, are sent away to various Parts, it likewise produces various Distempers, viz. the Gout, if the debility of the Joints contribute to it, a Rheumatism, and other Distempers: Lastly, the Cholick; if those sharp and pricking Humours are carried to the Tunicks of the Guts, or *Mesentery*; the disposition of the parts concurring with it.

Therefore let it be established, that the Humours which bring the Cholick, are for the most part sharp, and biting; and that otherwise they could not cause that violent pain: unless we will be of the opinion of some, that say probably enough; that various Humours of a different Nature meeting, caused Effervescencies, that by distending the Tunicks of the Guts and *Mesentery*, produce the Cholick:

This last manner of explication is taken from Chymistry, which prepares divers Liquors, contrary to one another; that afterwards mix'd together raise such violent Effervescencies, as break the very Glasses, if they be shut close.

That there happen such Effervescencies, tho' not so violent, in the Humours of our Body, and that they sometimes are the true cause of the Cholick, no body dares deny: for if in a natural State the Pancreatick Juice, mix'd with the Gall in the *Duodenum*, can come to such a Fermentation, as to distend the sides of the Gut, like a Bladder that is blown up, as *Regnerus de Graaf* has observed, making a ligature above and below the insertion of each *Ductus*; It is much more probable, that it may happen in a preternatural State, that various Humours be bred in our Body, of whose meeting such Effervescencies proceed, as bring forth Distensions in one part or other, and consequently a most violent pain.

These Humours of a different Nature, if we consult *Willis*, are derived from no other Spring, but the Blood and Nervous Juice, which, if they have got a greater degree of exaltation; so that the Blood has heap'd up a  
great

great quantity of fix'd Salt, and the nervous Juice has got a Flux and Acidity, or that the contrary has happen'd: then, I say, from the encounter of these two Humours an Effervescency will be rais'd, which, by distending the Membranes shall cause very violent pains.

But if any one rejects this *Hypothesis*, as thinking that there is no nervous Juice; let him remember what *Malpighius* not long ago has observed, that the whole Cortex of the Brain is Glandulous; and that its callous Substance is altogether wrought and wove with nervous Fibres, spread from the Glandules; which is a great Argument to prove, that these Glandules separate some Liquor from the Blood that is drain'd through the nervous Canals; since the Office of all Glandules is to strain some Liquor or *Lympha*: Add, that if the Animal Spirits had not some Vehicle, they could not be carried to all, especially the lower parts of the Body; since by their nature they are very light and nimble: To this I could join another Reason to prove the Existency of the nervous Juice; which is, that all the Glandules are endued with innumerable nervous Branches; which, that it has been done for motion or sense no Body can believe; but well to strain the remainder of the nervous Juice, that in form of *Lympha* it might be sent back again to the Blood.

The Blood alone, which, as we all know, consists of various and contrary Particles, may likewise furnish these Humours that so ferment together; for tho' they undergo not such a violent Fermentation in the Vessels, because they are involved in the Blood, and not at their own disposal; yet, when extravasated, and got loose, they exert all their Power, and attack one another.

From this Hypothesis of fermenting Humours might very well be deduced the Exacerbations, or Assaults, and Remissions; by which the Cholick, as it were by fits, returns and goes: For after the Fermentation once rais'd is ceased, it is easily to be conceived, that the matter is not ready, nor furnished from the Blood or elsewhere in a sufficient quantity to prolong and continue the Fermentation; and that therefore some time is required, till these contrary Humours may be accumulated afresh,

afresh, which when met in due Quantity and Quality shall raise another Fermentation, and cause a new Fit.

Sharp Humours also, which very frequently produce Cholick pains, without a Fermentation may cause the Fit, and its return; but if growing loose they are shaken off by the contracted nervous Fibres, as it happens often, some time is required for the arrival of fresh matter to renew the attack; this remission is longer or shorter, according as the contraction of the Fibres lasts, and the motion and tenuity of the morbidick Matter is more or less.

But that the Humours sometimes get into the substance of the Nerves and *Plexus*, as we said before, appears by this; that a Cholick pain is sometimes followed by a Palsie, which yet happens not but in a lasting Cholick, that has had many fits and returns. The reason of it is, that the Blood vitiated in its mixture, and not well made for the production of Spirits, furnishes 'em not pure, but mix'd with gross and heterogeneous Particles; which when strained through the wider Glandules of the Brain, and flowing through the nervous Canals, that are spread from them, stop their little Cavities, or rather Pores; and so shut the Passage to the Spirits, that from elsewhere are made in a small quantity. It may be said also, that we know by Anatomy, that the Blood circulates within the substance of the Nerves; for a Nerve being cut asunder and squeez'd, the red spots appear presently: It might be said, I say, that such Blood; when, because of its loss of Spirits, it is now quite impoverish'd; is not fit as before to perform its circular motion; and that consequently it stagnates in the substance of the Nerves, whose Vessels are very minute, and so stops the passages of the Spirits that flow into them, from whence the Palsy proceeds.

But to find out, why this Palsy rather invades the upper than the lower parts, there lies the difficulty: We cannot say with *Riverius*, that such a Palsy is produced from the Gall; which, because of its levity, invades the upper Parts; for this opinion falls of it self: Therefore in a matter so mysterious we can only say, that the Blood and Spirits, by that violent pain that infests the *Plexus* of the *Mesentery*, (for I am of opinion that it is chiefly this pain which the Palsy succeeds) are sent in an

extraor-

extraordinary quantity to those parts; which cannot be done, without they be sent at the same time to other Nerves that correspond with those parts, as we have said before, and be mix'd with gross and *Heterogeneous* Particles; which makes, that that matter, mix'd with the Spirits, descends to the middle Region of the Body, where the pain is raised, and so occasions a Palsy in the upper parts; the Blood, which also flows in greater quantity to them parts, contributing to the same.

But very often a Fever, either slow or continual, precedes the Cholick, before it brings the Palsy; because by that exquisite pain the Spirits are agitated, and consequently the Blood; and thence proceeds the Fever; which sometimes observes the same Rule with those that intermit; because the Cholick pain Rages also by fits; which cannot be but the Spirits at the same time must be disquieted, and the mass of Blood likewise by fits more agitated, and as it were brought into a Fermentation.

A Consumption also is sometimes the companion of the Cholick; because of the bad mixture of the Blood, not fit to nourish; or because the Nerves being stop'd, as we have said already, the Spirits are not duly distributed to the parts; which experience teaches us to contribute much to the nourishing of them: For a Nerve being tyed any where, the part withers.

But of what Nature these Humours are, that, producing the Cholick, sometimes fall upon the Tunicks of the Guts, and sometimes upon the *Plexus* of the *Mesentery*, whether they be bilious, serous, melancholy, or tartarous, I do not here determine; it is enough to our purpose to have said, that they are sharp and biting for the greatest part; for by this we understand how they act, and how they must be cured.

Nor are the Humours the only causes of the Cholick: but the *Flatus* or Winds, which are either got in the very Tunicks of the Guts, or are Shut up in their Cavities, have the same effect; and here they cause no pain by Vellicating or provoking, as we said of the Humours, but only by distending; for so much as this distension tears the nervous Fibres and Membranes asunder, which makes the pain. These *Flatus* are raised always from some Matter or other, chiefly by the heat of the Entrails, rarifying



rarifying the Humours and Ailment into Vapours and Exhalations; which in quantiry gathered in the Cavities of the Guts, or pen'd up between their Membranes, create a violent pain.

There are also other internal causes of the Cholick, but they are not so common; such are Stones, Worms, and the like; which cause a painful sense in the Guts.

The external causes of the Cholick pain are; first, all sharp, acid, or windy, and heavy Victuals; the abuse of the six unnatural things, by which the Mass of Blood is much altered and perverted; to these add violent Purges and Poysons, which, with their corrosive Particles, extremely irritate the Guts, whence the pain follows. The excessive use of Venery and Exercise, may likewise produce the Cholick: for so much as they dissipate the Spirits, and consume the Sulphureous part of the Blood, whence it grows sharper and sowerer, and consequently more apt to create pains.

Here I might be asked, why after *Laudanum* given, the pain having been eased for some time, the Fit returns with greater violence? to which I answer, that *Laudanum* eases the Cholick pain; first, because it stupifies the sense of the Guts; whence they are less able to feel pain; secondly, because of the resinous and sulphureous part of the Opium it intangles the stings of the sharp Humours, which hinders them from doing their Effect.

But the Fit that follows after the giving of the *Laudanum* is more violent than the former, because the *Laudanum* fixes the Humours; and hinders them, by benumbing the nervous Fibres and Spirits from being shaken off and scatter'd; so that it is no wonder, if, when the working of the Opium ceases, the sharp Humours gather'd in greater quantity, create also a greater pain.

By what has been said it appears, that there are two sorts of Cholicks; the one Windy, the other Humoral, which is commonly call'd bilious; as for the several kinds of pain, tho' *Sylvius* relates many, as gnawing, burning, tearing, cutting, &c. I hardly think them worth our notice.

The Signs of this Distemper are many; first, as appears by the definition, a very violent pain, which is common

common to the Windy and Humoral both, and explain'd by distension and irritation aforesaid; secondly, if the pain proceeds from Wind, it is eased by carminant, or Wind expelling Remedies.

It is a flying pain, and rages sometimes in one, sometimes in another part; for the Guts, making several rounds and foldings, the winds run from one end to the other; and the pain is now felt near the Liver, at another time near the Milt; in the same manner almost, as it is in the Hypochondriack Disease; from which, tho' the Wind Cholick is very like it, it is distinguish'd by Signs peculiar to the Hypochondriack Distemper. You may know also, whether it proceeds from Wind, by a tensive pain, an inflation, and rumbling of the Belly, ease after breaking of Wind; and lastly, if the manner of living before it was apt to breed Winds.

But sometimes the pain is fix'd, and remains pricking in one part; viz. when it proceeds from sharp Humours that lie down upon a certain part; and it is then chiefly, that the Vomiting is observed, because the Fibres of the *Plexus Mesenterius* communicate their motion to the Stomach; with which by the *Plexus lienaris* they are join'd.

There is also in the Cholick, the Windy as well as the Humoral, so great a costiveness, that the Patients cannot so much as break Wind backward, and sometimes the Medicines that are given are retained: the reason of which is, that the Fibres irritated in the place where the pain is, and grieved by that violent irritation, cannot be contracted or moved: as it is evident when the Members and Muscles of the Body are afflicted with pain; for then nothing is voided backward, and the injected Glysters, nay strong Purges are retained; because the Fibres of the Guts being preternaturally stretch'd cannot perform the expulsion, as it happens to the Bladder, when it is not fill'd, and yet very much distended with Urine.

But, because the Cholick pain so exactly imitates the Nephritick, that it deceives even the most expert Physicians; I shall relate some peculiar Signs, by which they may be distinguish'd.

The

The Nephritick pain then is felt in the Region of the Kidney, for there sculks the Cause that brings the pain. Secondly, it reaches as far as the length of the Uriter; which has a very great *Consensus* with the Kidneys, it being nothing else but the *Pelvis* (or the Basin of the Kidney) prolong'd to the Bladder.

Besides, the Cholick pain encreases after Meals, which the Nephritick does not; because the Stomach, when it is fill'd and cram'd with Food, presses the Fibres of the Guts, and *Plexus Mesenterici*; which by the irritation were grieved already, and so occasions a greater pain. But the Kidneys, being more remote from the Stomach, and not lying immediately under it as the Guts and *Mesentery*; but placed on each side, are not molested by it, and consequently the Nephritick pain is not augmented by its being fill'd.

Moreover the Vomiting is more violent, and the Body more bound in the Cholick, than the Nephritick pain: And the reason is, that in the first the Guts and *Mesentery* are affected, which have a greater *Consensus* with the Stomach than the Kidneys, as well by their nearness, as the Communication of the Nerves or nervous Fibres. The Belly is also more bound in the Cholick, than the Nephritick pain; because in that the Fibres of the Guts, which perform the expulsion of the Excrements, are immediately affected; and in this, but mediately, *viz.* by the Communication they have with the *Plexus* of the Kidneys.

The fourth sign, by which the Cholick may be distinguish'd from the Nephritick is this. In the Cholick, after voiding of Excrements, either by Vomit or Stool; the Patients feel ease, which they do not in the other; and the reason is, that in the first case the morbidick Matter, or at least part of it, is evacuated; whilst in the second case, or the Gravel, the Cause, which commonly is the Stone, remains always fasten'd in the Kidneys.

Lastly, in the Gravel the Urine is clear and bright; because the *Serum*, strain'd through the substance of the Kidneys, leaves the thick and tartarous Matter in the Kidneys, when it passes through 'em; which happens not in the Cholick pain; besides, that either sandy Urine,

rine, or the voiding of small Stones, precedes the Nephritic pain.

As to the *Prognosis*, if the Cholick pain be not extraordinary, or of long standing, but flies up and down, and is uncertain, it is easily cured and not dangerous: But if the pains be very violent, fix'd in one place, continual and lasting; if they bring Costiveness, Watching, Vomiting, Hiccup, Delirium, cold Sweats, and coldness of the Extremities, it is dangerous, and most commonly mortal. If the Distemper be obstinate, and yields to no Remedies, it turns to the Gout, Falling Sickness, and often a Palsy; a Cholick pain, that is Epidemick, and Pestilent is commonly mortal.

The Cure of this Distemper, as the Causes vary, ought likewise to be variously managed. And first, If it proceeds from Wind, begin with an emollient Glyster, which a wind expelling Medicine is to succeed presently; and this is to be repeated twice or thrice, as there shall be occasion; if the Glysters, that are given come not away again, as it happens most commonly, then you may dissolve two or three Ounces of blessed Water in a Decoction. Bleeding must not be neglected, for fear the excessive pain might cause an Inflammation; and this is to be repeated as necessity shall require, and the strength of the Patient permit; but if after the Glysters the Patient finds no relief, yet desist not from using them, but always prescribe them; sometimes Purgings, sometimes wind expelling, made with Marshmallows, Mallows, Mercury, Rue, Anise and Line-seeds, the tops of Dill, or the Flowers of Chamomile and Melilot, with the blessed Laxative. Afterwards order a Vomit, first a gentle, then a stronger, to Purge the Humours, from which the winds are raised, if the pain abates not; after that give a cooling Julep, or Oil of sweet or Bitter Almonds in Broth: Oil of Nuts in generous Wine injected for a Glyster, gives ease in the Wind Cholick; when the pain rages too violently in the Humoral, as well as Wind Cholick, prescribe Narcotics both in Glysters, and to be taken at the Mouth with that precaution, that you give a Purge before it. *Forestus* recommends the Flowers of Camomile. The Pulp of *Coloquintida* in a Decoction for a Glyster is proper. If the Wind Cholick

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be



be accompanied by a Costiveness, the Body is first to be mollified by Remedies, which we have prescribed against Costiveness.

Vomits, Bleeding are proper, and against the sharpness of Humours, Emulsions of the Seeds of White Poppies, with Oil of sweet Almonds, Milk: Anodine Glysters after Purging; pretty strong Purges; and, if the Distemper be obstinate, a Vomit in the infusion of *Scenna*; Bathings, as well where the Winds, as where the sharp Humours are in fault; the Pills of *Riverius* of Aloes, *Diagridium* and *Laudanum* are very proper in all.

If the Cholick proceeds from Poyson, or violent sharp things taken, use Milk, Oil, fat Broth, great quantities of Water, Anodine Glysters, &c. If Worms tearing the Tunicks of the Stomach brings this Disease, prescribe the Potion against Worms; Coral, Oil, *Mercurius, Dulcis*, and other things that are given in Distempers caused by Worms; after the *Univerfalia*.

In the Acrimony and Saltness of the Humours give a Pysane, Diaphoretick Antimony, and even Sudorificks: Hippocras and Cordial Waters commonly cure this Distemper; especially if it proceeds from Acid Humours.

If the Physician suspects that the Distemper is caused by the Gall, by signs declaring it to be such a Humour; use cooling and Acid Medicines, Bathes, shunning all things that are heating; in a word, all what was prescribed against Vomiting, the *Cholera*, &c.

Hot and cold Mineral Waters are also of use here. If bad Victuals taken, that are corrupt in the first Passages, have caused this Distemper, prescribe a purging Potion; and a Vomit, if any thing of them be left in the Stomach; use also Cupping upon the Belly; the Guts of a Wolf, and other outward Remedies, as Plaisters of Puppies, Anointings, &c. are altogether useless in my opinion.

But whether many Specificks, which Authors Recommend; as Horse-dung, the Guts of a Wolf dried, Sheeps-dung be proper I am not well satisfied. There are many other Remedies, which for brevity's sake I omit.

## N O T E.

Our Author has not nicely distinguish'd the Cholick from the Nephritick pain, by the Urine, which is thick in the beginning of the Cholick; but commonly thin and clear in the beginning of the Nephritick pain. Besides, for the better distinction, and consequently more accurate Cure, it will not be useless, to examine a little more curiously, what our Author only hints at, viz. the Similitude and Dissimilitude of the Cholick pain, with that which proceeds from the Hypochondriack Passion: For the chief Symptom of the Cholick, the Hypochondriack and Histerick Passions is a cruel pain about the Pit of the Stomach, and a Vomiting of greenish Humours; and here preparations of Steel, and the Waters impregnated with its Vitriol, are proper: About the Cholick of the Picts, which our Author explains under the name of that, which, after long afflicting the Patient, turns to a Palsy; I am of the opinion of *Sydenham*, that nothing is more efficacious against it, than 20, 30, or 40 drops of Balsam of *Peru*, given in some Sugar twice or three times a day; but if it be turn'd to a Palsy already, it must be cured by its proper Remedies. I shall now say something about the Specificks in all sorts of Cholicks. *Pacqueus* in *Riverius* cures this Distemper with the Powder of the Guts of a Wolf, a Dram of it being given in some Generous Wine; and *Amatus Lusitanus* calls it a Divine Remedy; others recommend not a little the Liver of the said Animal dried and powder'd; as also the Stones of a Horse, and the Dung of both dried and powder'd. *Riverius* says, the Athes of a Cork, that has been above a Twelvemonth in a Wine Cask, are a present Remedy; the Dose is a Dram in White Wine, a Dram also of Ginger or Castor are used, Garlick boiled in one part of Oil of Olives, and two of generous Wine, and afterwards applied to the Navel; the application of several Animals; the *Galbanetum* of *Paracelsus*, Oil of Bricks, Castle Soap, Civit; and Castor dissolved in Balsam of Rue; whatever our Author says to the contrary, are said to be of very great

‘ Efficacy. Clary likewise in a Decoction, or Essence  
 ‘ mix’d with some proper Vehicle; the Flower of Brim-  
 ‘ stone, half a Dram of it being given in warm Wine,  
 ‘ Volatile Salt join’d with a little Opium, Ear-wax, a  
 ‘ Bull’s or Stag’s Pizzle; Soot powder’d (which in a De-  
 ‘ coction may also be given for Glisters) Sugar of Lead;  
 ‘ the water distill’d from the Dung of a young Ox; Oil  
 ‘ of sweet Almonds with Malvesey, and half a Dram of  
 ‘ *Sperma Ceti*; *Mercurius Dulcis* mix’d with other Reme-  
 ‘ dies; and even Spring water it self made cold with  
 ‘ Ice (whose effect I have seen my self in a Cholick,  
 ‘ that would hearken to no other Remedy) are much  
 ‘ Recommended every where; yet I would not so trust  
 ‘ to these things, as to think they would work a perfect  
 ‘ Cure, but I would rather, after Bleeding, interlace  
 ‘ them now and then (as I was forced to do in that  
 ‘ Cholick in the Year 1693, which afflicted Epidemi-  
 ‘ cally almost all *Switzerland*) with some gentle, and  
 ‘ sometimes very comfortable Purges; not forgetting  
 ‘ the Glisters prescribed by the Author.

## C H A P. XI.

### *Of the Iliack Passion.*

**I**F any of the Distempers that invades the Guts be more  
 cruel than the rest, it is certainly this *Iliaca Passio*,  
 so call’d either from the Gut *Ileum*, which is reputed  
 to be for the greatest part the seat of this Distemper;  
 tho’ falsely, because other Guts ore no less Subject to it;  
 or from the Greek word *ἑλκεῖν*, which signifies to be  
 roll’d or folded about; because the Ancients thought,  
 that in this Distemper the Guts were tumbled together,  
 and as ried in a knor, and therefore by another name  
 they have call’d it *Volvulus*, or *Convolutus*, the Herb  
 Bind-wind; because it grows not strait, but winds it  
 self crookedly about other Plants; or else the Etymo-  
 logy of the Word is taken from the Convolution of the  
 Guts; there are some that call it *Miserere mei*, because  
 those that are afflicted with it implore the help of Physick,  
 seem

seem more worthy of compassion than others: but from the names let us go over to the thing it self.

The Iliack Passion is a Distemper chiefly belonging to the thin Guts; I say, chiefly to the thin; for the *Cæcum*, because of its disposition and site, as also the *Rectum* and *Colon*, because of its thickness, and a Ligament, that runs through all the length of it, cannot, unless it be in an obstruction or inflammation, be easily set upon by this Distemper, in which their motion is preposterous and inverted, or Antiperistaltick, being a contrary motion to what they have naturally, that leads from the lower to the upper parts; from the Guts not to the Fundament, but the Stomach; so that the Body being quite lock'd up, the Excrements that ought to be voided downward, are thrown up through the Stomach, *Oesophagus*, and Mouth; and this is the true state of the Iliack Passion.

But before we explain this Antiperistaltick and preternatural motion, we ought first to explain that which is call'd the Peristaltick, Natural, or Wormlike motion: For, as the Axiom says, by knowing what is strait, we know also what is oblique. Passing by then the motion of the Stomach, which we have made evident enough in the Treatise of Vomiting, we'll hasten to that which belongs to the Guts. This is made by orbicular or annular Fibres, with which the Guts throughout their Ducts are fill'd, and only as it seems by me to them; for what the oblong Fibres, which are all Membranous and not Musculous, contribute to this motion, I cannot see; for beginning at the *Duodenum*, and ending at the Fundament, it is not made by all the Fibres drawn together at once, but successively, so that one is pull'd after the other; which contraction depends upon the Gall, or the *Succus Pancreaticus*; which no sooner falls into the *Duodenum*, but by its sharpness, &c. the same is to be said from the Food that is taken, out of which some small Bodies come forth, that penetrating the Fibres of that part of the Guts, that contains the Food, stirs them up to a constrictive motion, by which it is shov'd further; where the like small Bodies provoking the Fibres make the like motion, &c. the sharper those contents of the Guts are, the quicker this motion is perform'd, which oc-



casions the Stools, as is to be seen in Purges, a Looseness, &c. which occasion a quicker Dejection, than our Victuals do commonly.

Having premised thus much of the natural motion of the Guts, it is not difficult to conceive the same inverted, and leading from the lower to the upper parts, as often as the passage is stop't; or the contents of the Guts, whether Chyle, Worms, or Excrements, by some stoppage or other impediment, cannot be expell'd through the *Anus*; for then they are forced to flow from the part affected back to the Stomach, and that by the contraction of the Annular Fibres, as we said before, shoving upward what they could not shove downward, because of the impediments that hinder'd it: For as the Contents always emit some small Bodies or Spirits, which must certainly be sharper the longer they have stayed in the Guts; because the separation of the Chyle is already made; those small Bodies getting into the Tunicks and Fibres of the Guts, cause them to be drawn together and to make a squeezing; whence it follows, that the passage of one part of the Canal being shut up, they must successively be carried from one part to another up to the Stomach, by the successive contraction of the annular Fibres; and at last be throw'n back into the Stomach; where, with the Spirits that are there, they make a violent Fermentation; which, because of the sudden strong and wringing motion of the Stomach, is followed by Vomiting, as we said before.

The Causes which can stop the passage of the Guts are, first, hard and dry Excrements, which, with their solid substance so obstruct the Canal, that they cannot go downward, and are forced to come back: A little heap of Worms may do the same. An *Hernia Intestinalis*, or a falling of a Gut through the *Procesus Vaginalis* of the *Peritonæum* into the *Scrotum*, has often been seen to cause this Distemper, and the reason of it is plain; for the Gut being strangled in this part, cannot give a free passage to the Excrements and other Contents.

An Inflammation also or other scirrhus Tumours all along the Canal of the Guts may have the same effect; not by obstructing, but swelling the sides of the Guts, and so straitning their Cavity; to which contributes not

a little the pain of the part, distended by the inflammation, much exasperated by the passing by of the contained Matter; and this is the cause, that whilst the Fibres, suffering by the Inflammation, cannot easily contract themselves, the Matter, which now comes to the inflamed part, must remain there, till the Fibres near the Inflammation being contracted, the contents begin to be shoved back.

Very sharp Humours, that use to cause observable Exulcerations, and consequently wrinkles in the Guts, may likewise produce the Iliack Passion; by hindring with the great straitning of the irritated, or exulcerated parts, the Food and Excrements from going any farther; which hindrance is greater, according as the affected part is much exasperated by the Food and Excrements that pass by it.

I am of Opinion, that this was the Cause, in the case where *Riverius*, from the Observation of *Mattheus* says, that the Suppositories and Glisters were voided by Vomiting. *Sylvius* and others observe, that a Gangreen of the Guts sometimes produces this Distemper; and that for no other reason, but the staying of the Contents in the Gangreen'd part of the Gut; which as being Dead, and consequently void of Sense or Motion, cannot thrust the Contents any further.

I'll add one Cause, and that is a folding together, and Strangulation of the Guts; not which the Ancients meant; by which the Guts are twisted, and tied into a Knot; because we know that the *Mesentery*, to which they are fasten'd, cannot permit it; and no Cause is able to reduce them to that state; but that folding, which is made by the upper part of the Gut entering the lower, or the lower entering the upper part, and caused by the relaxation of the Fibres in some part or other; or else by their being distended with Wind preternaturally; and that this folding of a Gut is not less liable to produce the Iliack Passion, than other causes, is witness'd by the Observations of many Practitioners of this Age.

The Signs of this Distemper are, some common with other Diseases, as a pain in the Region of the *Abdomen*, Costiveness, loathing of Victuals, an inclination to Vomit, Vomiting, Restlessness, a difficulty of Breathing, and even of making Water, which proceeds from the distension of the *intestinum rectum*, squeezing the bladder:

Others are peculiar to it, as an excessive Pain, Inflation, and Distension, a hard high swelling in the lower part of the Belly, a total suppression of Stools; first bilious Vomiting, afterwards fetid Vomiting of Ordure; and when the Patients are near their end, a cold sweat, coldness of the Extremities, restlessness, fainting, &c. all which may be easily explained.

About this total suppression of Stools Authors differ; *Galen* affirms it; but *Hippocrates* relates of a Woman in this Distemper, that her Stools were thin and crude; which must be understood, either in the beginning of the Distemper, or the evacuation of the Contents below the part affected.

As to the Signs of the Causes, if the Distemper proceeds from an Inflammation, the pain will be most violent, which, the *Abdomen* being squeez'd, will increase; there will be a Fever, a heat in the lower Belly, the Distemper will be more acute, the Vomiting bilious, and the Excrements be voided faster; if it proceeds from dried and hard Excrements, you may soon know it from the relation of the Patient, the hardness of the Belly, the Costiveness; in the beginning there will be no pain, nor the Distemper so violent afterwards: If from Worms it has its rise, you'll have a Youthful Age, Worms voided, in a word, all the Signs of Worms to be related hereafter.

The sharp Humours, or an Exulceration you may know by a pain without a Fever, or the absence of the aforementioned Signs; but a Gangreen is difficult to be discover'd; unless it be by the Inflammation that precedes it, which commonly turns to a Gangreen, or by a sense of coldness felt in the *Abdomen*, the absence of pain in the beginning, &c.

But a Rupture bringing this Distemper wants no *Diagnosis*; the Complication of the Guts, or their being folded in one another is hard to be discovered, and the Physician must only guess at it by the Winds, which it is used to produce, or the absence of the Signs denoting the other Causes; besides here is no Fever nor heat in the beginning.

Concerning the *Prognosis*, if any Distemper be dangerous it is this, for it is very acute; yet the danger is greater,

ter, as the Causes vary; that which proceeds from a little Ball of Worms or harden'd Excrements, is not so much to be fear'd: That which is caused by a Rupture may be cured; so the Gut, that is fallen, be not inflamed, or so swell'd, that it cannot be reduced into its place again.

The Iliack Passion that is occasion'd by an Inflammation, or a Gangreen, is the most dangerous of all; that, which proceeds from a Complication of the Gut is mortal, if the upper part enters the lower, but it is curable, if the lower enters the upper part.

The Cure of this Distemper, according to the variety of the Causes, ought to vary: If it proceeds from harden'd Excrements or Worms, give the same Remedy, as we shall prescribe hereafter, where we treat of Costiveness and Worms.

If the Ruptures, call'd *Hernia Intestinalis*, produces it, let the Patient lie backward, his Head and Body declining downward, and so with emollient Fomentations reduce the Gut gently; afterwards apply a Truss, that it may not come down again: Or let the Operation, which is used in a *Hernia*, be performed; when that is done, prescribe gentle Purges, as Cassia, Fat Broth, Oil of Sweet Almonds, a Decoction of Sheeps Guts, emollient Glisters and Fomentations, and the like; not forgetting bleeding if required.

The Iliack Passion, caused by an Inflammation, is cured by often repeated Bleeding, the use of cooling Ju-  
leps, gently purging and cooling Glisters, nay even Oxy-  
crat; to assuage the pain, order a Glisten of Milk with  
Yelks of Eggs, and Oil of Lillies.

Narcoticks also taken inwardly, outward Fomentations, or Oxicrat, cooling and gently purging Remedies in small Doses, Rhubarb, Manna, Tamarinds, Cassia, the Royal Pissane: Of the Inunctions and Cataplasms prescribed by *Riverius* I approve not; the Bath, which *Riverius* proposes, seems to me of little use, unless there be but little Fever; neither do I think that his Vomits are very proper.

Let the Patient observe a very spare Diet, and his Drink be Barley Water; give him Decoctions of cooling and Emollient Herbs, often and little at a time.

That,



That which proceeds of a Gangreen is incurable; yet hot Remedies inwardly, and hot Fomentations outwardly, may be prescribed.

That which is caused by sharp Humours, the *Universalis* being perform'd, appeasing, moistning, and emollient Emulsions, with Milk, Laudanum, Syrup of white Poppies, of Water Lillies; Anodine Glisters of Milk, a Decoction of Sheeps Guts, Baths, &c. are required for the Cure.

Lastly, in a Complication of the Guts; the Bellows applied to the Fundament, which *Hippocrates* proposes in his Book of Diseases, whatever *Zacutus Lusitanus*, and *Epiphanus Ferdinandus* in his Observations say, are not proper, because the Distemper is not in the strait or any thick Gut; and because it is to be fear'd, the *Abdomen* might burst; but Baths, to loosen the parts, Purges, emollient Fomentations; as also emollient Remedies taken at the Mouth, and now and then a purging Glisten. Use always Narcoticks when the pain presses, as also Quicksilver, not by Grounds, as *Pareus* formerly gave it, but an Ounce or two of it, which in some case may act by the weight: but here it is done by giving the Gut the sense of heaviness, by reason of which the Guts strongly contract themselves, and strive to expel the Contents; which is proper in that Complication, where the upper part enters the lower; the Leaden Bullets which Authors propose I am not for.

A Prifane, which is proper in every kind of the Iliack Passion, is made of an Ounce or two of the Pulp of Cassia, dissolved in a Pint or two of Spring Water, of which Liquor let the Patient often take a Cup.

#### N O T E.

\* Dr. Sydenham performs the cure of the Iliack Passion in this manner: The Patient is Blooded in the Arm nine or ten Ounces: Some hours after he gives the following Powder. Take of the Rosin of Scammony, or for want of that, the Rosin of Jalap, twelve Grains, Calomel a Scrupel. Make a Powder, to be given in a Spoonful of Milk, drinking after it a Spoonful or two of the same; Or if the Patient likes Pills better, take

‘ take half a Dram of the Pills *Ex Duobus*, a Scrupel of  
 ‘ Calomel, with a sufficient quantity of Balsam of *Peru*;  
 ‘ make four Pills, to be taken in a Spoonful of Syrup of  
 ‘ Violets.

‘ But if the Patient throws this up, give him presently  
 ‘ 25 drops of Liquid Laudanum in good Cinamon-  
 ‘ Water: but when by the Use of this, the Vomiting and  
 ‘ the Pains of the Belly remir, let him again take the  
 ‘ aforesaid Cathartick; but when the Anodine has lost  
 ‘ its Strength and Virtue, and the Vomiting and Pains  
 ‘ return, the Cathartick remaining in the Body the mean  
 ‘ time, fly again to the Laudanum and repeat the same  
 ‘ every four or six Hours, till the Guts be altogether at  
 ‘ quiet; by which time the Cathartick will begin to  
 ‘ work by Stool.

‘ Neither will it be amiss an Hour or two after Bleed-  
 ‘ ing to inject a Glyster of those things that work po-  
 ‘ tently: as the Smoak of Tobacco blown into the Guts,  
 ‘ which Operation should be repeated some Hours after,  
 ‘ unless Stools appear sooner.

‘ When the Cathartick has done working let him  
 ‘ take the following Draught. Take of strong Cinamon-  
 ‘ Water an Ounce, of Liquid Laudanum 25 Drops;  
 ‘ make a Draught, which is to be repeated twice, three  
 ‘ times, or more in a Day, if the Vomiting and Pains  
 ‘ cease not; as also when these Symptoms have left the  
 ‘ Patient let him yet notwithstanding, to make a perfect  
 ‘ Cure, take the same Anodine in a lesser Dose for some  
 ‘ Nights about Bed-time: Thus far *Sydenham*. Now I  
 ‘ shall set down some Specificks.

‘ Among the Specificks after the Smoak of Tobacco,  
 ‘ the Oil of Nuts, Line Seeds, &c. that Colloquintida  
 ‘ has been boil’d in with some Rue and Nitre, and a little  
 ‘ Wine is accounted the chief; outwardly new laid  
 ‘ Cows Dung smear’d all over the *Abdomen* breaks the  
 ‘ Winds wonderfully, and blunts the Acrimony of the  
 ‘ Humours very much: Some extol very much the  
 ‘ Blood of Bats (which being a Medicine that makes the  
 ‘ Hair come off, is without doubt very penetrating)  
 ‘ and likewise the Skin of Serpents boil’d in Oil of Olives.  
 ‘ Our Author is perhaps in the right to disapprove of  
 ‘ Gold and Leaden Pellets, because they do so much

‘ with

‘ with their Weight, and can move nothing: But the  
 ‘ same cannot be said of a Pellet made of *Regulus* of *Antimony* very well refin’d, viz. the *Martial*; of which I  
 ‘ can assert likewise, that it makes no disturbance; the  
 ‘ Iliack Pills of *Rhasis* are likewise much talk’d of,  
 ‘ especially by *Berber*. For the rest read what we have  
 ‘ said of the Cholick; add only the Ointment of Sow-  
 ‘ bread, which is of no contemptible Efficacy.

## C H A P. XII.

*Of Costiveness.*

FOR the performance of the Duty of the thin, as well as the thick Guts in their peristaltick, and natural Motion, it is not enough that the Aliment and Excrements contained in them are not by an inverted Motion brought upward, as we have seen, it happens in the Iliack Passion; but that also, that leads downward; that is, the Motion which is perform’d toward the Fundament, ought not to be too quick, as in a Looseness, Stomach, or Bloody Flux’s, nor too slow, as it is in Costiveness, and when the Body is bound: The reason of which is, That as the Aliment in a Looseness, &c. cannot be well concocted, digested and attenuated, to get into the Milky Vessels, and duely to be mix’d with the Blood, because of the little stay it makes in the Guts; so in Costiveness, when the Body is bound, the said Aliment, by tarrying and remaining too long in the Guts, is corrupted, dried up, and scorch’d, and by shutting the Passage to the Excrements, which ought to be thrown out every Day, or at least every other Day, hinders their Evacuation, and contaminates the Blood with its bad Vapours, hindering also the Separation of the better part of the Chyle from the gross and impurer part, which is help’d by the Gall’s being mix’d with it: not to speak of many other Disorders that arise from the long retaining of the Excrements; as Fevers, Head-ach, &c.

But when I speak of Costiveness I mean not that Distemper, where there is a total Suppression of Stools; for that rather belongs to the Iliack Passion; but that only,

only, where the Excrements, and the Remainder of our Food, staying longer than naturally they should, sometimes three or four Days, or more, are at last voided hard and dry without great straining.

We shall not treat here of the Peristaltick Motion, which has been already explain'd in the Iliack Passion; nor meddle with that silly Question of the Ancients, whether this Symptom belongs to the expelling Faculty's being diminish'd, or to the retaining Faculty's being augmented; for if the Expulsion of the Excrements be not made, that is not to be imputed to the Debility of the Faculty; but the Defect of the animal Spirits, that are to contract the orbicular Fibres of the Guts, the dryness and hardness of the contained Matter, their great Resistance, by which they hinder and elude the Contraction; or to the Defect of those little Bodies, that shou'd come forth from the Gall, or the Contents, to stimulate the Spirits.

The chief Causes of Costiveness are hard Excrements, commonly proceeding from hard and too solid Victuals: for the Excrements partake of the Nature of the Food, from which they are made; or though the Victuals are not so hard, it may happen, that by drinking too little, they are not diluted enough; in which case, being destitute of their due Liquidity, they easily grow hard and bind the Body. The Excrements may also grow hard by a hot Temperament of the *Viscera*, by which, whilst the moister parts of the Humours are dissipated and exhaled, the Remainder grows dry and gets a Stiffness, that is able to astrict the Belly. So we see that People of a hot Constitution are troubled with this Distemper chiefly in the Summer; in which there is the greatest dissipation of the Moistness through the Pores, and that as soon as the Cold returns, their Bodies are open again, as *Willis* observes.

There are two other Causes that may occasion this Distemper: The First is the Defect or Scarcity of the *Mucus*, or Slime of the Guts; that is used to besmear them, and keep their Cavity slippery. The Second is the Gall's Entrance into the Guts from its Ducts being denied, by an Obstruction or Stoppage of the Liver: we all know how much both these Humours; *viz.* This Slime  
and



and the Gall, contribute to the Evacuation of the Excrements: For this *Mucus*, strain'd through the Glandulous Tunick of the Guts, and likewise through the Glandules found out by *Peyerus*, makes not only the Cavity slippery of the Guts, but dilutes likewise the Excrements; no wonder then, that where this is wanting the Body is bound. Nor is the Defect of the Gall less able to produce this Distemper: For this Humour by its *Sulphureo-saline* Acrimony and Bitterness is, as it were, a Spur to Excretion; *viz.* by provoking the Nervous Tunick of the Guts by its Acrimony; or furnishing the Guts with a stimulant, to drive out the Spirits, that are in the Orbicular Fibres; Wherefore the Gall has been always call'd by the Physicians the Natural Glyster; because it quickens the slow and lazy Belly no less, than purging Medicines dissolved in Glysters; and therefore its Absence may cause the Body to be bound: The Truth of which is manifest in the Jaundice.

There are more Disorders of the Guts, that can cause a Costiveness; as Tumours, Obstructions; not total ones, for they would cause the Iliack Passion, and a benumbing of the Guts, or a manifest Palsy; which makes, that the Contractions cannot be performed, because the Influx of the animal Spirits is denied.

The *Diagnosis* is evident from the Relation of the Patient; if the absence of the Gall produces it, you shall have the Signs of Obstructions, a Distention, and Hardness of the *Hypochondria*, the Jaundice, the Excrements shall not be very Yellow, or high coloured. If it proceeds from a hot Temperament of the *Viscera*, you shall know it by the Constitution of the Patient, a heat of the *Abdomen*, and other Signs, that shew the heat of the Blood: if the want of the Sline of the Guts be the Occasion, the outside of the Excrements will be very dry; or there shall be a hot Constitution that dissipates that Moistness: if Distempers of the Guts be the Cause, you shall have the Signs of them: and if, lastly, it depends upon dry Victuals, want of Drinking, Exercise, excessive Sweating, and other external Causes, you may know it by what is past, or the Relation of the Patient, or the Standers by.

As to the *Prognosis*, Costiveness is not dangerous, unless the Excrements be totally suppress'd, or very long retain'd: or that it proceeds from some grievous Distemper of the Guts: as a Palsy, a Gangreen, an Inflammation, a Swelling: or if it be obstinate, and last a great while, for then other Distempers come to it, as Cholicks, Head-aches, Fevers, &c.

The Cure of this Distemper is perform'd by things that loosen the Belly, always regarding the Causes from which it proceeds; if the Heat of the *Viscera* be the Cause, bleeding is to be prescribed, and repeated at the Discretion of the Physician; in other Cases it is not so proper, unless the Body be Plethorick, or another Symptom comes to it: If the Guts are stuff'd up with Excrements, and cause this Distemper, use laxative and opening Apozemes, and other Remedies so often spoken of. If Distempers of the Guts produce it, prescribe Remedies that are peculiar to those Distempers.

In the mean time in all these Cases let the Belly be soften'd with emollient Fomentations of a Decoction of the Roots of Lillies, Marshmallows, the Leaves of Violets, Bear-foot, Pellitory of the Wall, Mallows, Linseed; or Cataplasms of the same, Bathings, emollient and purging Glysters often injected: make them of an emollient Decoction with Oil of Lillies, Butter, Cassia; after a stronger has been injected before, for with them you must begin; or a Decoction of Sheeps Guts with the *Catholicon Diaprunum*; which Glyster is to be given in a small quantity; Prunes eaten, as also Cassia, loosen the Body strangely; likewise Tamarinds, a Decoction of Prunes, with the Herb Mercury, or a Dissolution of Cassia, the Mucilage of the Seeds of Flea wort, and Quinces extracted in Water of Mallows; Oil of Sweet Almonds in Broth; Cassia taken fasting before Dinner. Lastly prescribe Purges, and repeat them often; as a Decoction of Bete, the Herb Mercury, Mallows, the Roots of Marshmallows, with Senna, Manna, Jallop and Cassia dissolved; or if you will have a stronger Purge give the Electuary of Fleawort, Diacarthamum; Liquids are copiously to be taken, to dilute the dry Excrements; as also Broths, shunning dry and solid Food: let the Meat which the Patient eats be of young Animals: Suppositories

atories are likewise much used, and made of Honey and purging Powders; Colloquintida, the Powder of Hiera Picra, Diagridium or Roch-Allum, which is the best of all, as *Sylvius* observes; these Suppositories are to be frequently repeated. Lastly, When the Body is bound nothing is better than to keep it cold, so it be not to excess.

## N O T E.

‘ In Costiveness some recommend Quicksilver, or rather Wine in which it has been infused for some Months; of which they give a Spoonful now and then. But the Remedy that is extoll’d by many as the most efficacious, even in the most obstinate adstrictions of the Belly, is *Aurum Fulminans*; the Effect of which yet I never saw my self, though I have often tried it: They give it to six, eight or nine Grains made up in Pills with the Extract of black Hellebore. They add, that it must not be edulcorated too much; otherwise it loses its purging Virtue, and only becomes a Diaphoretick Medicine. The Antimonial Tincture of Tartar, not too Aromatick, is likewise no unpleasant Remedy; twenty Drops of it being taken in some Wine, or Broth, for some Days. The same may be said of the Tincture of Antimony, after its Digestion in the Liquor of fixed Nitre, extracted with Spirit of Wine, foliated Earths, the Liquor of Tartar, &c. of which consult the Chymists. We add not here the Infusion of the Oriental Leaves in cold Water, mix’d with Wine for an ordinary Drink, a Spoonful or two being taken immediately before Dinner; nor the Choice of Food proper to keep the Body open; partly because our Author has done it already, partly because it is sufficiently known by every one. He that wants more may read the Chapter of the Cholick; or that of the Iliack Passion.

## C H A P. XIII.

*Of the Lienteria and Coeliaca Passio, or the  
Belly-Flux.*

**H**AVING done with Costiveness, the Order requires we should treat of the contrary Distemper: *viz.* the Belly Flux; of this there are many Species; as the Bilious, the Serous, the Bloody, and other Fluxes; which having no mind to run through, I shall only speak here of that which is chylous, or where the Victuals come away little or nothing alter'd. The Authors divide this Flux in two kinds; *viz.* a *Lienteria*, which is also call'd, tho' wrongfully, a smoothness of the Guts; where the Aliment is voided suddenly, indigested as it is taken; that is, without any very sensible Alteration, by Stool: And the *Coeliaca Passio*, the Name being taken from *κοιλία*, or the Belly, in which our Victuals little digested, and imperfectly concocted come away by Stool; so that the difference of these two is only in the Degree; consequently they have the same Causes, only more or less violent, and require the same cure.

I have said in the *Lienteria*, that the Aliment taken is voided by Stool, without any Alteration or Concoction that is very sensible; for we must not believe, let *Riversius* and the Ancients with him say what they will, that ever our Victuals can come away, absolutely speaking, as they were taken; since it is impossible, that they should creep through the Stomach and Guts, that have so many Windings and Turnings, but they must suffer some Alteration in the Passage. Add to this that the Gall, and *Succus Pancreaticus*, that are shed in the *Duodenum*, must give our Aliment some Alteration, by being mix'd with it: And therefore, though the greatest part of the Authors say, that in a *Lienteria* our Victuals come away altogether unconcocted and unalter'd, just as they were swallow'd, we must not understand it in a strict sense, but only in a large Signification, that in this Distemper the Alteration of the Excrements is so little, and so little to be seen, that it is not worth the naming.



This Distemper has also another kind, which is distinct from the two former, and might be call'd *Diarrhea Chylosa*, or the Chyle-Flux: This happens, when the Aliment well concocted and digested in the Stomach, and further elaborated into the *Duodenum*, comes away altogether; its purer part, which is the Chyle, and ought to have gone into the Milky Vessels, because they are stop'd, being voided mix'd with the grosser and impurer Excrements. Yet this last, with the other two, because of the similitude of the Excrements, we'll reduce to one. I could add a fourth Species in which the Aliment not well concocted is voided, but not so suddenly after it is taken; and this is a Symptom of a distemper'd Concoction. Some question whether this Distemper belongs to a distemper'd Concoction; but though we cannot deny but that this Aliment is not well digested, for want of staying in the Stomach and Guts; yet the Fault lies not in the Ferment, or any cause that usually spoils the Chylification; but rather in the Stomach, that expells the Aliment too soon: So that the Retention, to speak with the Ancients, is principally affected, and the Concoction only at the second hand. And hence it is, that *Galen* not without Reason thinks, that the Stomach is affected no less than the Guts; though this Distemper be reckoned commonly among the Diseases, of the Guts; because the greatest part of the Concoction is performed in the Stomach.

If you examine the Causes of the *Lienteria* and *Celiac Passio*; among the many Causes which the Ancient alledge you'll find some idle and silly enough, and consequently to be rejected. And first, what can be more unreasonable, than to say, that a cold and moist Temperament of the Stomach and Guts produces this Distemper; because forsooth, cold and pituitous Humours are apt to besmear the Guts, and make them slippery, by reason of which the Aliment passes the sooner: Indeed if it was carried from the *Oesophagus* to the Fundament through the Stomach and Guts in a strait Pipe, this Reason might take place; but considering the disposition of the Stomach and Guts, their Site and Windings, it is so far from it that the said Exclusion can be deduced from their cold Temperament; that it would rather make the Aliment stay the longer, for in a cold and moist constitution of the

Parts,

Parts, the orbicular Fibres that make the Expulsion are relax'd, and the Spirits too much diluted, quickly to perform the contractive Motions.

As to the Imbecility of the retaining Faculty, caus'd by some grievous and mortal Distemper, which the Ancients reckon among the Causes of a *Lienteria*, it needs no confutation: for it sufficiently falls of it self by only the Obscurity of the Term, which Physicians avoid now a-days. If, Nature failing, a Bloody Flux sometimes turns to a *Lienteria*, and the Lienterick Flux commonly invades People that are weaken'd by a malignant Fever, as *Riverius* asserts to bring in this Cause; yet it proceeds not therefore from any debility of the retaining (if Qualities are to be admitted) but rather Strength of the expelling Quality, that is of the annular Fibres of the Guts contracting themselves often and quickly; for there can be no other cause of a quick Expulsion. Add that the retaining Faculty is a mere Name; for it retains the same thing which it expells. The other causes of a *Lienteria* and *Caliaca Passio*, which *Riverius* alledges, are not so improbable; viz. that it proceeds from an Irritation in the Stomach and Guts, which makes, that the parts contract themselves upon the least touch of the Aliment; whence, for want of stay, they cannot be concocted or digested, and are quickly expell'd downward. This Irritation is used to follow upon a Corrosion and Exulceration of the inner Surface of the Stomach and Guts, after the *Mucus* has been scrap'd off. In this manner it proceeds also from sharp Humours, that is, an Acid *Lympha* that stills through the Glandulous Tunick, or from Poyson or other sharp things taken. The same Irritation follows upon, not an Inflammation, but a disposition to an Inflammation; which, by stretching the Membranes, makes their feeling more exquisite; which make them receive this Irritation even from the softest Aliment. The same likewise is produced from a Disposition of the Spirits to a Convulsion; as in other parts.

The third Species, which we have distinguish'd above from a *Lienteria* and a *Passio Caliacæ*, and call'd by the Name of Chyle Flux, where the Chyle, mix'd with the Excrements, is voided, but not so suddenly; is caused by an Obstruction of the Milky Vessels, either in their

Orifices, that come out in the Guts, or made by the Humour it self, that is strain'd through them continually ; when it is too thick and sticks in the Strainers themselves, of also in its Progress towards the *Pancreas* of *Asellius*, where, by an Obstruction of this part, the Chyle is hindred from going to the Receptacle of the Chyle ; or lastly, by a stoppage of the *Mesentery*, and a hardness and obstruction of the Glandules here and there scatter'd upon it. The cause of the Chyle's being hindred from entering the Milky Vessels, which *Aërius* and *Celsus* alledge ought not to be admitted, at least for a total cause ; for a Scar in a Bloody Flux, or Exulceration of the Guts, unless it is all the Guts over, cannot hinder the entrance of the Chyle into the Milky Vessels ; and who would admit of such a Scar ? Yet, though it cannot be admitted for a total Cause, it may for one in part : for commonly, when some part of the Guts is cover'd by a Scar, all the Chyle cannot be carried into the Milky Vessels.

This Distemper may be soon known by the Excrements, and the quick Stools after eating ; and be stiled *Lienteria*, or *Celiaca Passio* ; according as the Aliment shall seem to be more or less concocted ; that is, the more or less the Excrements are as they shou'd be.

If this Disease proceeds from an ulcerous or inflammatory Disposition, it shall be manifested by a pain and biting in the Stomach and Guts ; as also by the quick and sharp Stools. If it be caused by a stoppage of the Milky Veins, or a depraved Concoction of the Stomach ; the Stools will not be so quick, for want of the Irritation ; and in this case the Excrements will be of a Grey Colour, which is the Colour of the Aliment fermented in the Stomach ; which differs from what happens in a *Lienteria*, caused by an Irritation ; in which the Victuals are voided as they are swallowed ; that is, without hardly any Alteration but what they got in the chewing.

As for the *Prognosis* ; this Distemper, whatever Cause it proceeds from, is always dangerous : for the Body is cheated of its Nourishment ; and the Blood, for want of the Chyle's coming to it, is much depraved in its mixture : If this Distemper continues, or comes upon some other grievous Disease, it terminates in Death. It is commonly follow'd by a Dropsy, Phthisick, Consumption, &c.

Con-

Concerning the Cure; if it takes its rise from an Ulcerous disposition of the Stomach, after Bleeding to be repeated, if necessary, prescribe all Remedies that smoothen and appease; as Emulsions with *Laudanum*, fat Broths, Oil of Sweet Almonds, and especially Decoctions of the Extremities of Animals, or Sheeps Heads and Guts, which let the Patient take every Day; likewise water made mucilaginous with the Seeds of Fleewort, Quinces, Roots of Marshmallows is not improper; if purging be required, give the Pulp of Cassia with Rhubarb, in a Decoction of Roots of Marshmallows, Line and Fenugreek Seeds, the Flowers of Camomile, and afterwards a strengthening, and a little astringent Opiat, made of Conserve of Wild Roses, Quinces, of Myrobalans, and Nutmegs Preserved, the Opiat of *Salomon*, Confection of Alkermes, made up with Syrup of Wormwood; injecting the whilst Glisters that are Anodine, detergent, and a little Astringent. A Bath and the use of Milk is proper likewise: If the Distemper proceeds not from an Ulcerous, but an inflammatory Disposition on the motion of the Spirits, Bleed often, and prescribe cooling Remedies; as cooling Emulsions, Juleps of cooling still'd Waters, or a cooling Decoction; the use of Oxycrat, Broths with cooling and tart Herbs, Narcoticks, a purge of Tamarinds, Cassia, Manna, Rhubarb; a refrigerant Fomentation of Oxycrat, or a Decoction for Bathing; in the mean time administer cooling and purging Glisters, to be injected every day or every other day; afterwards give an Astringent as above mention'd: Lastly, if the Chyle Flux be caused by an obstruction of the Milky Vessels or the *Pancreas* of *Ascellius*, or a stoppage of the Glandules of the *Mesentery*, lay the whole stress of the Cure, after the *Universalea*, upon Astringent Medicines, such as we have often repeated, when speaking of the other Diseases of the first Passages; but if finally this Distemper be a Symptom of a depraved Concoction, proceeding from a debility of the Ferment, chuse your Remedies out of those above mentioned, when we treated of a Distemper'd Concoction.



## NOTE.

‘ Whatever is to be done in the *Cæliack* and *Lienterick*  
 ‘ Flux, is manifestly shewn by what our Author says of  
 ‘ them in general, and what shall be said in the following  
 ‘ Chapter.

## C H A P. XIV.

## Of a Looseness.

**A** Looseness in the sense we take it in, is an immoderate frequent and sudden going to Stool : in which the Excrements very liquid and diluted, as well as sharp and peccant, commonly both in quantity and quality, with the Belly-ach and Gripping commonly preceeding the Stools, are voided without any Inflammation or Exulceration of the Guts.

It differs from a *Lienteria*, in that the Excrements are not indigested, unaltered, or Chylous ; nor the Stools so quick, after eating ; it differs also from the Bloody *Hepatick*, and Hemorrhodial Flux, in that no Blood, Matter, or any Liquor like that, where Meat has been wash'd in, is voided here with the Excrements.

The Ancients derive the differences of a Looseness from three Springs ; the Matter voided, the place whence it flows, and the manner how it is voided : but we leave out one of the three, as standing upon a bad Foundation ; for the Humours evacuated by Stool cannot flow from the Brain, the Milt, the Womb, the *Mesentery*, nor the Liver it self, unless by that you mean its Gall-Bladder, since they come from the whole Body, or out of the Blood, as every one knows that understands Anatomy ; we, I say, fetch the differences of a Looseness only from the other two Springs ; namely, the Matter voided, and the manner how it is evacuated ; and reduce all the Species of it to these two Heads ; tho' *Riverius* makes divers kinds of them.

And first, in respect of the Matter voided, some Loosenesses are call'd Bilious, where abundance of sharp Gall,  
 staining

staining the Excrements with its yellowness is expell'd; not by it self, but mix'd with other serous Matter, because that dilutes the Excrements; others are serous, which the Ancients also call pituitous, in which watery, and viscous, or thin Humours, less impregnated with Gall, are frequently and copiously voided, most commonly with griping before it: as *Galen* relates of himself, that after a fit of the Cholick he voided a great quantity of cold Slime.

There is also another kind of Looseness in respect to the Excrements, which is the worst of all, and call'd *Colliquativa*; this follows upon lasting Distempers, and commonly slow Fevers, Phthisick, Dropsies, ardent, malignant, and pestilent Fevers; and is commonly the forerunner of Death; not because, as the Ancients say, it proceeds from a strength-dissolving Faculty; for where there is such a Dissolution, the contracting Motion of the Guts must be diminish'd; but because it signifies the greatest fault in the Spirits and Humours, and as it were a last endeavour of the Spirits to fly away; it is called *Colliquativa*, or Melting, because it seems to melt and consume the whole Body:

The Excrements that are voided, are not only liquid, as in other Loosenesses, but also mix'd with a greasy and Oily substance: which the salt and sharp Blood, circulating through the parts, takes from the Body it self, or is like a lye made of them: That out of the Blood together with the serous parts settles in the Guts; *Riverius* counts another kind of Flux, which he calls the *Stercorous*, or the Ordure-Flux, viz. when bad Food taken in too great a quantity, corrupted in the first Passages, is voided in form of liquid Excrement; but this cannot properly be call'd a Flux; because it is of no continuance. In respect of the manner, in which the Excrements are voided, a Looseness is either Critick, or Symptomatick.

The Cause of this Distemper is various as the Kinds vary; first, that which is call'd bilious, has no other Cause than the Gall, which, as it in the natural State at certain times stimulates the Guts to an Expulsion; so being more copious or sharper, it induces the said expulsion more frequently; as it happens in a Looseness:

This Humour is derived from the Gall, Bladder, and Liver, through both the Ducts, the *Biliar* and *Cholidochus*; or from the Mass of Blood discharging the *Serum*, impregnated with the Gall, into the Cavity of the Guts; by which a greater irritation of the Guts, and a greater provocation to the Expulsion of the Contents are made.

I relate not the external Causes that heap up the Gall in the Body, or make it sharper, which have been enough explain'd in the foregoing Distempers; as the *Cholera*, Vomiting, and Inappetency.

A serous Looseness is caused by serous Blood, fill'd with abundance of Salts, and promotes the copious flowing of this sharp *Serum* into the Guts, and its separation through their Glandules. Among the external Causes are counted Salt, and sharp Aliment, gross, and Sea Air, Watchings, Exercises, and other unnatural things, that are apt to flux the Blood; and make it salt and sharp.

The Causes of the Looseness call'd *Stercorous*, are not difficult to be found out, nor any other; but bad crude Victuals too liquid, and unfit for Concoction; or Victuals, tho' never so good, taken in an excessive quantity: For, when they are not well Concocted and digested, they rot by staying in the Guts, and at last create a Looseness.

There are likewise other external Causes of a Looseness, as Purging, and violent Remedies; which, how they cause quick and frequent Stools, we have demonstrated before. But among the internal Causes, besides those already mentioned, some count Worms; that by biting and irritating the Tunicks of the Guts, stir them up to continual Expulsions. But indeed this may not only be said of the Worms, but also of the sharp Humours that breed the Worms.

The Cause which produces Fat, Oily, *Colliquative* Stools, is, as we said before, the salt Blood, that by former Distempers is made very sharp, preys upon the Fat Oily Substance of the parts, and takes it along as it Circulates.

The breeding of Teeth in Children is used to cause a Looseness; by reason (as I think) of the pain and watchings; by which the Spirits are much agitated, and the bad Humours stagnating in the first passages.

Of

Of the *Diagnosis* of a Looseness, I need not to say much, because it sufficiently shews it self; as for example, the Signs of the Causes of the Gall are taken from hot Food taken, yellow or green Excrements, and other things that manifest the abundance of Gall; a serous Humour is known by the Excrements, that are not much coloured with the Gall; and sometimes thin sometimes viscous. The Signs of a *Colliquative* Looseness are greasy Excrements; that waste the Body after a great illness: The Looseness call'd *Stercorous* may be known by the Victuals, that were either not good, or taken in too great a quantity; if it proceeds from Worms, a childish Age and the voiding of Worms will shew it; if the breeding of the Teeth occasions a Looseness, you may know it by the Age and the cutting of thee Teeth.

As to the *Prognosis*: A Looseness invades us either in Sicknes, or Health; in the last case, unless it lasts very long, and dejects the strength, it is of no ill Omen; in the first or sickly state we must distinguish; for if it happens with relief of the Patient, Nature expelling the Morbifick Cause, it is good; which it is not, if it be uneasy, and dejects the strength. When Excrements from being Liquid, begin to be something thicker, it is a sign, that Nature works well: When Excrements are voided without being perceived by the Patients, it is a bad sign, for it shews either an error in the Mind, or a relaxation of the Muscle of the Fundament, caused by a dissolution of strength.

A Looseness coming to a Dropsy breaks the Distemper, as the Aphorism says: which is to be understood of the begining of the Distemper, when the Patient is yet strong. For in what sort of a Dropsy soever it comes; where the Distemper is inveterated, it is a forerunner of Death.

To a Woman with Child a Looseness and especially if it continues is also very dangerous: Not so much in respect to the Life or Health of the Mother; as that of the Child, and for fear of a Miscarriage, because of the nearness of the irritated *Intestinum rectum* and the Womb.

The cure of a Looseness, minding only its proper Remedies; without Consideration, whether it depends upon another Distemper, or not; need not to be managed no  
other



other ways, than by giving of appeasing, diluting, and gentle purging Medicines. Narcotick and cooling Medicines, especially if the Gall or the Acrimony of the Humours be the Cause, are proper: In the mean time open a Vein, which is to be repeated; and give one or two Glysters in the beginning every day, either of legitimate Decoction, made of the Roots of Marshmallows, of Mallows, Violets, Fleawort, Quince, and Linseeds bruised, with the Pulp of Cassia dissolv'd in Oil of Lillies; or of Milk with yolks of Eggs, or a Decoction of Sheeps Guts; intermixing often purging Glysters; the lenitive Glysters must succeed the detergent ones, made of a Decoction of the Roots of Gentian, the Leaves of Agrimony, Wormwood, whole Barley, Bran, Liquorice and Raisins; after them give adstringent Glysters of Bistart, or Cinquefoil Roots, Plantain Leaves, Sheperds Purse, Milfoil, Wool-blades, Barley, red Roses, Cypress Nuts, Galls, the Flower and Rind of Pomgranates, and Catholicon, with a double quantity of Rhubarb.

In the mean time at the Mouth are to be taken Emulsions of the Seeds of White Poppies, and Milk, Narcotick and adstringent Syrup of dried Roses, Quinces, Myrtle, &c. *Laudanum* in cooling and tart Juleps; if the Gall be the Cause: And other Medicines taken in at the Mouth that mitigate a Looseness, as Broth with three or four yolks of Eggs or oil of Sweet Almonds, poach'd, as also hard Eggs bind the Body, an Opiat of Conserve of Roses, wild Roses, with Frankincense, Bole-armoniack, seald Earth, and Conserve of Quinces, or the Pulp of Sorb-Apples and Quinces roasted under the Ashes with Rhubarb. An astringent Fomentation, and Bath; Diaphoretick Atimony, Sudorificks; as in a serous Looseness a drying Pissane is of great use, Coral, Pearl; and in both sulphureous hot Mineral Waters, Volatile Salts; in a bilious Looseness a Bath of Mineral Waters.

But whilst these Remedies are given at their Time, the Patient is also to be Purged, when it is required, tho' the Belly is very Loose: For we find that when the Cause of the Distemper is Evacuated, and as it were Eradicated by purging, the Looseness ceases; it must be given in the Form of a Bolus with Cassia, and compound Syrup of Succory,

Succory, because by Purging it binds, or of some of the same in a Decoction; that is somewhat Astringent.

The *Stercorous* Looseness lasts not; or, if it does, the same Remedies, after the *Universalis*, will Cure it.

The *Colliquative* Looseness is hardly to be cured; yet it is help'd, after gentle Purges, and lenitive Glysters, by corroborating and restoring Medicines; as Venice Treacle, Confection of Alkermes and of Hyacinth; a comfortable Diet, and Broths of Capons, Partridges, &c. That Looseness that proceeds from Worms in Children, is cured with Syrup of Wormwood, and the Decoction of the same, *Mercurius dulcis*, Coral, the Seeds of Citrons, Oily Remedies; Wine, &c. After the *Universalis* inject a sweet Glyster to entice the Worms; that, which comes in breeding of Teeth, is to be mitigated with Narcoticks and Anodine Glysters, giving also often the compound Syrup of Succory with Rhubarb.

#### N O T E.

‘ In a Looseness after the *Universalis* half a dram, or  
 ‘ a dram of the Extract of Tormentil, given in a convenient Vehicle, is much recommended. As also the  
 ‘ Leaves and Roots of Plantain, Water-willow, both  
 ‘ purple and yellow; the Seeds of Purslain, and more  
 ‘ specifically the Seeds of Fluxwort, that the Surgeons  
 ‘ use; the Moss of Willows dried, and given to half a  
 ‘ dram. Mastick boild in a proper Water for the ordinary  
 ‘ Drink, as also Liquor impregnated with the Smoak of  
 ‘ the said Mastick: by letting the Smoak into a glazed  
 ‘ Earthen Pot with Water, till the Water has contracted  
 ‘ the Taste of the Mastick. Sugar of Lead is praised  
 ‘ likewise, especially if it be join'd with the Vitriol of  
 ‘ Mars, whence they make the artificial *Hematites*, whose  
 ‘ Dose is from ten grains to a scruple; others recommend  
 ‘ Goats Fat melted, and with Flower made to a thin  
 ‘ Pudding; the Decoction of Gum Arabick; in an epidemic Looseness Alexipharmick Remedies must be added; as the simple mixture, or the Diaphoretick in  
 ‘ very acute Diseases, the volatile Salt of Vipers, Venice  
 ‘ Treacle, either by it self, or with Balsam of Peru, of  
 ‘ Mecha, or Copaiva; to these things add the Inunctions  
 ‘ with

- ‘ with the Oils of Mastick, Wormwood, &c. Bags with
- ‘ Mint, Wormwood, red Roses, &c. Boild in red Wine.
- ‘ See more of this in the next Chapter.

## C H A P. XV.

*Of the Bloody-Flux.*

**D***ysenteria* or the Bloody-Flux is a Name, which the Ancients gave to all manner of Bloody-Stools; whence *Galen* in the third Book of the Causes of Symptoms, Chap. the 2d, Relates four Species of this Distemper. The First is, when because some part of the Body, that is cut or wounded; Blood is voided by Stool; or also because of some evacuation of Blood through other parts, that is stoppt. So we see those, that have something tore within, as those that have received a Wound in the *Abdomen*, void Blood sometimes, that is, when the Wound penetrates into the cavity of the Guts or Stomach: Many Men and Women likewise, that are used at certain times to void Blood through the Nostrils, Womb, &c. If these passages are stoppt and shut up, void great quantities of Blood, sometimes by Vomiting, sometimes by Stool, as it were by the way of *Crisis*. For the Blood heap'd up in a great quantity, and raging in the Vessels, when it cannot be evacuated its usual ways, seeks another passage; and by its quantity opening the Orifices of the Vessels, forces its way sometimes through one part, sometimes through another; yet with relief of the Body, without doing any Hurt.

The Second kind of Bloody-Flux is that, in which the Blood is voided like Liquor that Meat has been wash'd in. And this *Galen* imputes to an Imbecillity of the Liver, not able to draw the Blood: As if the Liver had a Blood attracting faculty, and that the Blood it self, set forward by the systole or dilatation of the Heart, could not get there by its Circulation. Therefore it is better to reduce such a Flux, which is commonly called the *Hæpatick* Flux to the old Piles, or as *Varrhon* calls it, the varicous or swelling disposition of the Mesaraick Veins; that distended by thick Blood, that is unfit for Motion,

let that which is thin and serous, flow into the Cavity of the Guts, which being strain'd with the Blood, looks like Water, that Meat has been wash'd in.

The Third difference of Bloody-Stools, which *Galen* proposes is; when Melancholy Blood, that is black and shining, is expell'd backward; which, as he will have it, is turn'd black, and burnt up by staying too long in the Liver, or Milt: But, under Correction of so great a Man, I cannot see through what Pipe this black and burnt up Blood can be carried into the Cavity of the Guts; I would rather say, that this Blood, thrown up by the Mesaraick Arteries, had got the Tincture from the Acid Humours, as Ink from Vitriol; and that so, when afterwards voided, it look'd like black Gall.

The Fourth kind of Bloody Stools is that, in which the Patients often void Blood mix'd with Excrements, nay with Slime and Matter, with Pain and Torment: Which shews that there are Exulcerations in the Guts, which are greater or lesser, according to the standing of the Distemper; and this is that kind of Bloody Stools, which properly ought to be call'd *Dysenteria*, or Bloody Flux and of which we are to treat now.

Therefore, as is said, it is defined the voiding of bloody Excrements, accompanied with Gripping and Torments, caused by an Exulceration of most commonly the thick Guts; for when the Corps of Patients, that died of this Distemper, have been opened, the thin Guts have rarely been found Affected. Tho' it is not absolutely against reason, that an Ulcer should be bred in their Tunicks. The gripings and torments, which are the perpetual companions of this Distemper, are caused from the Guts, that inwardly Corroded and Excoriated are made more sensible, whence from the Excrements, the Gall, and other Humours that pass by, they are irritated and stirr'd up to such painful Contractions.

The causes of the Bloody Flux, which the Ancients alledge, are many: viz. Four, of the Gall; when it is yellow, green, congealed, or black: Then there is the salt Phlegm, made in the Head and carried to the Guts: But, to exclude this Phlegm, for which there is no passage from the Head to the Guts: There is no occasion for alledging more subrilly, than truly so many sorts and differences



rences of Gall; for the Gall, without that we need to fly for Refuge to its yellowness, greenness, &c. If it be more impregnated with Salts, than it should be, and made sharp, may corrode the Tunicks of the Guts, and so cause a Bloody Flux; tho' Sylvius is of Opinion that the Gall, as abounding with a *lixivious* Salt, is not fit to breed Ulcers, which, says he, is the effect of an Acid.

Besides the excessive exaltation of the Gall, there is an other true and legitimate cause of this Distemper: Namely, the serous, sharp, or acid Humours, not brought from the Head, but the mass of Blood, through the Arteries that moisten the Guts; these humours flowing into the Guts in great quantity, by degrees and insensibly exulcerate them; from which exulceration the Orifices of the Vessels are open'd, and hence comes that great quantity of Blood, which is observed in a Bloody Flux.

But if I am asked, why in a Bloody Flux the thick Guts are more affected than the thin ones; I answer, because the thick Guts are more fleshy, and consequently fuller of Blood; and therefore, because of their fleshy and consequently looser Composure, more fit to receive the sharp and acid Humours, than the thick Guts, whose tunicks being Membranous and Nervous, have a closer contexture, and are more able to resist the working of the Morbifick Cause.

Besides the Corrosive Humours, if any flow into the thin Guts, are dull'd and mitigated by the Chyle, that runs through their Cavities; but in the thick Guts the Morbifick Humours are so far from being dull'd and temper'd by the Chyle (there being none there) that they are rather assisted by the Excrements, whose Salts are much exalted; and their action is rather augmented, and promoted by the cells and folding; that are in the Gut *Colon*, and detain the Morbifick Cause. It is a question among Authors, why the Gall sometimes in a short time causes a Bloody Flux; when yet that Distemper comes not upon Loosenesses of a long standing, that proceed from the Gall: Which question may be solv'd by saying, that the Gall is capable of various degrees of Exaltation, and that it is sometimes more and sometimes less sharp: And consequently, tho' it may have sometimes a sufficient Acrimony to irritate the Guts, and create a Looseness; yet

it is not always sharp enough to exulcerate their Tunicks, and so produce a Bloody Flux.

It may also be answered to solve this difficulty; that the bilious Humour may be peccant two ways; in quantity, and in quality or Acrimony: That the latter produces a Bloody Flux, and the first a Looseness; which lasts a great while; because the Gall is made in a great quantity.

Yet *Mercatus* answers it otherwise, and says; that the Gall, if it be fluid and passes quickly, only produces a Looseness; because it has no time to exert its Power upon the Tunicks of the Guts; but, if it be slow and viscous, that then by its stay in the Guts it corrodes their Substances, and causes a Bloody Flux. Yet with this Answer, which is plausible enough, *Sennertus* finds fault; and says, that sometimes the Gall is very viscous and sharp, and yet produces no Bloody Flux: And at other times, tho' it is thin and liquid, causes this Distemper and not Looseness.

But this saying of *Sennertus*, as it costs him nothing, so it is worth as much; because he could never prove it, either by reason or experience; for the slow and viscous Gall, so it be sharp and corrosive, as it is supposed is, because of its stay, more apt to exulcerate the Guts; than when it is thin and fluid: so it is not come to a greater degree of Acrimony; for if it be advanced to the highest degree of sharpness, there is no question but it will produce a Bloody Flux, whether it be viscous, and thick, or thin and fluid.

The said Author then, not thinking the Answer of *Mercatus* satisfactory, supposes that the Humours, which produces the Bloody Flux, are endued with a peculiar and occult quality, by which they are only offensive to the Guts: and this he proves, by that the Bloody Flux is commonly contagious; and that the *Effluvia* either exhaling from the Excrements of the infected, or flying in the Air at certain times of the Year, affect only the Guts, and no other parts of the Body: In the like manner, says he, there are pestilent Plurisies and Peripneumonies, proceeding from peculiar *Effluvia*, only offensive to the Lungs: Thus the spittle of a Mad Dog is only hurtfull to the Brain, a Sea Hare to the Lungs, Cantharides

Cantharides to the Bladder, purging Remedies to the Guts; and the like. Which antipathy, not with *Sennerius* to run to occult qualities, may in my Opinion be thus explain'd. As the structure of all the parts of our Body differs, so the configuration of the Pores, with which it is fill'd is various; so they are round in some, square in others, triangular, oblong, &c. Therefore it must not seem strange if the Particles and *Effluvia*, coming from divers Bodies, as a Sea-hare, Cantharides, the Excrements of those that are afflicted with the Bloody Flux; it is no wonder, I say, if they are contrary to various parts of the Body; for as themselves are likewise endued with divers Figures, it is impossible they should all exert their Power upon the same part: And therefore, according to the proportion which they have with the Lungs, Bladder, and Guts, they work some upon one, some upon another part, and penetrate its Contexture with their little Darts. The Virtue of the Cantharides may be explain'd in a peculiar Manner from the rest; for they consisting of a sharp and corrosive Salt, as appears by their Caustick Virtue, as they go through the Pores of the Skin into the Mass of Blood, are, as it is usual with Salts, presently dissolv'd in the serous Humour: But the Serum, endued and impregnated with this Salt causes no Pain in any other parts, but the Bladder; because it is blunted and its Action retarded by the Oily and Balsamick Liquor of the Blood: But when the same Serum is strained through the Kidneys, and becomes to be its own Master, then it works most Potently upon its Tunicks, which are Membranous, and of an exquisite Sence, and Causes an Exulceration and Inflammation in the same.

But as in the Air there are sometimes various little corrosive Bodies, either bred there, or exhaled from the Earth, so the Air is capable of producing various Distempers, that are Pestilent, and Contagious; which, according to the diverse Configuration of those little Bodies, affect sometimes the Lungs, sometimes the Blood only, and sometimes the Guts; whence arises a great variety of contagious Distempers; as general Peripneumonies, the Plague, malignant Fevers, epidemick Bloody Fluxes, and more such.

The Ancients are much troubled in determinating, what that white slimy Matter is, which in so great a quantity

is commonly voided in the Bloody Flux. Some think it to be Fat; others Phlegm, flowing from the Brain: *Riverius* makes a long Induction to prove, that it is an excrement, that is residue of the third Concoction, but none of them can prove his assertion: Wherefore I am of the opinion of several Physicians of Note, that it is nothing else, but the *Mucus* or Slime, that is used to stick to the Guts, mix'd with matter that comes from the little Ulcers of the Guts.

The external Causes of this Distemper are all things, that are capable of breeding sharp, and acid Humours, and exalting the Gall; among which sharp Victuals, that are much subject to Putrefaction, acid Fruits, raw Waters, Poysons, and violent Medicines are not to be named the last; and it is not difficult to explain, how they all produce the Bloody Flux: for they consist of a copious, either sharp, or acid Salt; which carried to the Blood, makes it of the same disposition, and capable of producing this Distemper; nay, they are able to cause the Bloody Flux, before they go to the Blood, as it is plain by Poysons and violent Medicines, for as much as, when let down to the Stomach and Guts, they immediately run their sharp Joints in their Tunicks, and tear and corrode them.

Among the six unnatural things, that by altering of the Blood, and making it incline to be sharp, or sower, create the Bloody Flux, the Air is the chief; which, being loaden with corrosive Particles, proportionated to the substance of the Guts, is the Parent and cause of Epidemick Bloody Fluxes. To this must be added the *Effluvia*, exhaling from the Excrements of the infected; which how they work we have said above.

The *Diagnostick* Signs are easily gathered from the Definition of the Bloody Flux; for the Excrements are coloured by the Blood that is mix'd with them, and be-daub'd with Matter and Slime of the Guts: Besides, there are pains and Gripings, which increase when the Patient feels a motion to go to Stool; because then the Excrements, passing through the thick Guts, in which the Exulcerations are, create no small irritation in them, from whence the pain proceeds.

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There are also Watchings, because the Spirits are also agitated by the pain, whence the Patient can take no Sleep, which properly consists in a calm quietness of the Spirits. Thirst likewise, and loathing of Victuals accompanies the Bloody Flux; because part of the Mass of Blood made sharp now, or of the Gall in the Blood so preternaturally exalted, is laid down in the *Oesophagus* and Stomach, where it dejects the Appetite, which was raised by sowerish Ferment, and creates Thirst, or an Appetite to Liquids, with which those sharp Salts may be diluted and blunted.

A Fever most commonly, tho' not always, attends the Bloody Flux; because the Pain, and Watchings, or rather the superfluity of the Gall agitating the Blood, it must needs grow hot and circulate faster; whence come the Fever and the celerity of the Pulse.

*Riverius* gives some Signs to distinguish, whether the thin or thick Guts be affected; and says, that if an Ulcer infects the thin Guts; first the pain is more violent, because of their exquisite feeling; and that secondly, the Excrements are not voided presently after the pain, because the way from the thin Guts to the Fundament is longer; and lastly, that the Blood and Matter are more mix'd with the Ordure; all which happens not in an Exulceration of thick Guts: But because, as we hinted above, the Bloody Flux invades most always the Guts *Colon* or *Rectum*, we need not dwell any longer upon these Signs.

I set not down the Signs of the Causes, because, if they are internal, they all agree in their Acrimony, and consequently are opposed by the same Remedies: *viz.* lenitive and evacuating Medicines; and if they are External, you may know them from the relation of the Patient.

The *Prognosis* of this Distemper is to be made thus: The more violent Symptoms it has, the more dangerous it is to be call'd; sometimes it is so benign, that the Patients go about with it, and then it is easily cured. Sometimes again it is so malignant, that it not only invades all People in general, but kills also abundance of them; and then it is very dangerous indeed: The greater and deeper the Ulcers are, that are bred in the Guts, the  
more

more danger they forebode. Therefore *Hippoc.* in the 4<sup>th</sup> Section the 26<sup>th</sup> Aphorism says; *if in the Bloody Flux the Patient voids little bits of Flesh, it is a mortal Sign*; for it shews that the Ulcer corrodes and eats the Tunicks of the Guts.

Immoderate Watching, copious voiding of Blood, are ill Signs, because they wear the strength much; whence the Patient grows weaker and unable to bear the working of the morbidick Cause. A *Lienteria*, Vomiting, immoderate Thirst, and the Hiccup are very bad Signs, for they shew that the Distemper is communicated to the nobler parts, the Stomach and Midriff. Old People and Children, because of their natural debility, and loose Contexture, die of this Distemper oftner than young Men, and those that are grown up, because their Contexture is firmer, and consequently more able to resist the morbidick Cause.

As to the Cure, you ought not presently to begin it with Remedies that are adstringent, and stop the Flux; as is done by Quacks and Empyricks: For fear that the morbidick Humour, detained and translated into the Brain and Lungs, might cause more dangerous Distempers; but commence first, by evacuating, lenitive and detergent Medicines, and afterwards use those that consolidate and restrain the Flux: All sorts of purging Medicines are not to be used here; only such as are lenitive and adstringent as well as Purging; as *Cassia*, *Rhubarb*, *Myrobolans*, compound Syrup of *Succory*, from which you may make a Syrup in this manner.

Take of whole Barley, Plantain and Sorrel Leaves, each a handful; of Licorice and purging Raisins, each two Drams, red Roses one Pugil; boil it to 3 Ounces; infuse in it one Ounce of *Cassia* newly taken out; of *Sal Prunel* half a Dram; in the strain'd Liquor dissolve of powder'd *Rhubarb* half a Dram, of compound Syrup of *Succory* six Drams: Make a Potion to be taken in the beginning of the Distemper, which, at the Discretion of the Physician, is to be twice or thrice repeated. For then, when the Strength is intire, it is best to attempt the Evacuation of the peccant Humours.

Some in this Distemper, and I think with Judgment, prescribe Vomits, for by them the morbidick Cause is

evacuated, and likewise drawn from the Guts where the Ulcer is: Wherefore you may give half a Dram, or a Dram of Salt of Vitriol in lukewarm Barley-water; or, if you would have it strong, about four Grains of *Mercurius Vita*, in a little Conserve of Roses, if the Patient be very strong.

*Diaphoreticks* are no less useful than Vomits or Purges if they be administer'd with caution, and in due time: For they thrust those sharp Humours of the *Serum*, that feed the Ulcer from the center of the Body to its Circumference, dry the Ulcer in some manner, nay also restrain the Flux. For as we ought to reason of contrary things the contrary way; if an outward coldness cures Costiveness; because, by stopping the pores of the Skin, the Humours, which continually exhaled through them, are repelled; by which afterwards the dried Excrements are diluted: so by the same reason inverted Sudorificks, by thrusting those Humours outward, must cure a Looseness, or the Bloody Flux. Whence it is no wonder, that *Penotus* recommends that Potion, in which with dried Roses, and the Flowers of Pomgranates, the Bark of *Guajacum* is boiled: tho' *Riverius* asserts, that Bezoarticks and Sudorificks are of no great Virtue in epidemick and contagious Bloody Fluxes.

Tho' Authors differ about Bleeding, yet in the beginning of the Distemper, before purging, it ought to be done twice, three times, or more, if there be a Fever; because it draws away part of the morbidick Matter, tempers the Mass of Blood, and makes a revulsion of the Humours, that continually flow into the Guts.

After the evacuations, the use of Narcoticks is of wonderful effect in this Distemper; for they not only abate the Pain and Watchings, but also, by stupifying the Spirits, restrain and stop the Flux: Wherefore Emulsions ought not to be neglected with a Grain or two of *Laudanum*, or sometimes half an Ounce of Syrup of white Poppies: Acids also, if the raging Gall causes the Distemper, are of extraordinary use. Glsters should be given once or twice a day, and ought to be vary'd; as in the beginning sometimes Lenitives, and sometimes detergent ones; that is sometimes of Milk, or a Decoction of Sheeps Guts, with Sugar, Oil of Roses, Yolks of Eggs,

Eggs, and the mucilage of the Seeds of Fleawort, and Quinces, and sometimes of a Decoction of Barley, Bran, Raisins, Licorice, red Roses, and the Flowers of St. John's Wort, dissolving in it Sugar, Honey of Roses, or likewise Turpentine dissolved in the Yolk of an Egg, which both cleanses and heals the Ulcers: Glisters may be also made of a mixture of lenitive and detergent Medicines: As, take an equal quantity of Milk, and the Decoction of Barley, dissolving in it the aforesaid things; or if it be necessary, two or three Grains of *Laudanum*.

Having administred those Remedies for some time, with which you must always mix some adstringents that may lessen the Flux a little, you must go over to Remedies, that are altogether adstringent, of which you'll find abundance in *Riverius*; but the best of them I shall set down here.

And first, as for the Glisters, they may be made of a Decoction of the Roots of Comfrey, Tormentill, or Bistort, the Leaves of Plantain or Milfoil, Shepards Purse, Horsetail, Knotgrass, red Roses, the Leaves or Flowers of Pomgranates or Quinces, adding, if you please, Starch made without Lime, Bole-Armoniack, Seald Earth, Gum Tragacanth, or Arabick: As for Juleps, let them be made of the Decoction of the same Herbs, or Plantain and Rose Water, with Syrup of dried Roses, Quinces, Troches of Bole-Armoniack, Seald Earth, Coral, or Pearl prepared, adding Syrup of Pomgranates, or Limons, if the Gall runs over, or other Juices aforesaid. If you prescribe an Opiat, as sometimes it is necessary to vary the forms of Medicines, let it be in the following manner.

Take of Conserve of Roses, and Roots of Wallwort each an Ounce, of Quinces half an Ounce, one preserved Myrobolan; of Coral prepared, and Troches of Bole Armoniack, each two Drams; of Ivory, or Hartshorn, half a Dram, with compound Syrup of Succory, make an Opiat; of which let him take the bigness of a Chestnut, drinking upon it an altering Decoction of Barley, Plantain Leaves, and red Roses.

If there be a Fever, keep to a spare Diet in the beginning, otherwise more nourishing Food may be allowed of: Therefore let the Patient be only fed with Broths, in



which you may often dissolve two Drams of Almonds ; or make them with Barley and Almonds, which sweeten the Acrimony of Humours very well ; some recommend Medlars and Sorb-Apples, in a Bloody Flux ; but, because they are not of an easie Concoction, they are cautiously and sparingly to be given.

Let his ordinary Drink be a Pilsane of Barley with red Roses, Chrystal Mineral ; if there be no Fever use Milk and Bathing ; because they mitigate and temper the Acrimony of the morbidick Humours to a wonder.

Outward Applications, tho' *Riverius* has a great many ; because they are out of date, and for the greatest part of no use, I shall propose none ; unless it be a Fomentation of Oxicrat, which may be of some use here.

At last to rout and exterminate the Distemper totally, let Mineral Waters be your last Refuge ; for they are of great virtue in cleansing the Guts, and tempering the Gall.

#### N O T E.

‘ The Specificks in the Bloody Flux are *Sperma Ceti*,  
 ‘ Bulls or Stags Pizzle, either in Powder or a Decocti-  
 ‘ on ; as also Harts-horn, and Man's Skull powder'd,  
 ‘ and the white Decoction ; the powder of Bread, that  
 ‘ has been often soak'd in the Juice of Elder-Berries, and  
 ‘ dried, the Roots of Saxifrage, Livers of Serpents, or  
 ‘ Vipers, and green Frogs, from half a Scruple to a Scruple : an Apple, or rather a Quince, fill'd with Wax  
 ‘ and Gum Arabick, and so roasted and eaten. *Album*  
 ‘ *Græcum* of a Dog that has been fed with Bones, from  
 ‘ 30 Grains to a Dram in Goats Milk with Sugar ; a  
 ‘ Horse's Hoof roasted ; three Roots of Satyrion infused  
 ‘ in the Drink ; (this they say is good also for a Rupture)  
 ‘ Water that Cork has been boiled in ; the Cackins of  
 ‘ Wall-Nuts, gather'd in the Spring and dried, a Dram  
 ‘ of them is given in a proper water ; Alam either raw  
 ‘ or Burnt ; the Root of Comfrey, or the Root of Tor-  
 ‘ mentil boil'd in Milk ; Rice Milk with Yolks of Eggs,  
 ‘ and the Juice of Ground Ivy ; Balsam of Sulphur va-  
 ‘ riously prepared, either taken inwardly or in Glisters ;  
 ‘ Glisters of the Broth of Cray Fish, with Goats Fat and  
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the Syrup of Comfrey; outwardly they apply Bags with Oak Leaves boil'd in Vinegar; a Fumigation for the Fundament of Amber, the shavings of Harts-horn and the Dung of a young Ass; or of the Decoction of Wool-blade, or of Ginger, as they do in *England*, some make a secret of Wild Tansey, or Silver Weed wore about the Small of the Back: Others give a Dram of the Root of red Saxifrage powder'd in Wine, or the Yolk of an Egg: But the *Hipococnana*, which the *Spaniards* call *Vejuquillo*, is deservedly esteem'd beyond the rest; there are three sorts of it, the white, the black, and another, which is of a Cinnamon colour; and this latter is the bitterest, and by its vitriolick taste, shews the most astringent Virtue. I have often prescribed it with never failing success; and it neither inflames the Fever, nor brings any other worse Symptoms; but it always provokes Vomiting with great ease, and stops in a short time the Bloody Flux tho' never so violent. The Dose is a Dram in Plantain Water impregnated with Mastick.

## C H A P. XVI.

*Of a Tenesmus.*

THE strait Gut, as well as the Stomach, and other Guts, is liable to Distempers; and not only such as are comon to the said parts, as Inflammations, Obstructions, &c. but peculiar ones; among which that, which by the Auteurs is call'd *Tenesmus*, is the Chief. It is (to come to the definition presently) a continual and troublesome inclination to go to Stool; which is frustraneous, and comes to little or nothing, yet the Patients continually feel new motions; and with often trying void nothing but some Slime that sometimes looks Bloody, sometimes Matter; and this is a true and genuine account of a *Tenesmus*. From this definition we may easily gather, that the affected part is, or that the seat of the Distemper is in the strait Gut, which is continually provoked to Stools; tho' I deny not, that going to Stool depends not wholly upon the strait Gut; for the Contents must descend, and be carried from the *Pylorus* quite to the Fundament;

which depends upon the successive drawing together of the thin as well as the thick Guts; nevertheless those motions which we feel, and which press us commonly before we go to Stool, proceed from no other Cause than the irritation of the strait Gut; where the Excrements, when once they are come to it, by Vellicating it with their Acrimony, or furnishing it with *Sulphureo Saline Effluvia*, that enter its orbicular Fibres that are fleshy and strong, raise a Contraction that is able to conquer that of the *Sphincter*, and the shutting of Fundament.

If therefore in the natural State the desire of going to Stool proceeds only from an irritation of the strait Gut, made by the Excrements that are got thither; then in the preternatural State we need to seek for any other seat of the Distemper, nor other Causes; but such, as by continually provoking that part, are able to create a contraction in it; such are sharp and salt Humours, that are viscous withal, and for that reason, sticking close, and perpetually Vellicating; these Humours, come out of the Mass of Blood that is fill'd with Salts; and are deposited in this part, because of its peculiar disposition. Such are likewise little Worms, call'd *Ascarides*, which bred in this part out of the Excrements, that are more rotten and stinking here than any where else, are sometimes in great numbers gnawing the nervous Tunick of the strait Gut; the same may be caused also by a rough Stone in the Neck of the Bladder, and a painful or inflamed swelling in any of the parts that are near the strait Gut.

The Stone does it because of the irritation of the Bladder that is communicated to the strait Gut, with which it has a great correspondence; not only because they touch one another, but also, by reason of the Nerves proceeding from the Extremities of the *Par Intercostale*, which appears by this; that People at Stool make Water, if there be any in the Bladder, and making Water feel motions to go to Stool. But the painful and inflamed swelling of the parts near the strait Gut, may cause a *Tenesmus*; because of the hot Sulphureous Particles that exhale from the Inflammation, enter the Fibres of the strait Gut, and expand the Spirits that are in them;  
or

or by reason of the sharp and bilious Humours, that for want of Circulation sweat out from the diffused parts, and vellicate the strait Gut.

The said Guts being inwardly or outwardly corroded, is also able to cause a *Tenesmus*, and that by reason of the sharp Humours feeding the Ulcer, or the Matter that comes from the exulcerated Gut; all which are very fit to irritate the strait Gut, especially now it is excoriated, and consequently more sensible.

*Note*, that speaking of the *Tenesmus*, I mean that which comes by it self; and not when it attends the Bloody Flux; for then it is not properly a *Tenesmus*, but the Bloody Flux; for the Exulceration that produces the latter, may reach quite to the strait Gut: As to that Slime which is voided in a small quantity, I am not of the opinion of *Riverius*, that it is something that is left of the third Concoction: Therefore I say, that it is nothing else, but the Slime of the Guts, as I have said already, speaking of the Bloody Flux; that scraped from them by the Acrimony of the Humours, is voided by the great straining: and that the Blood or Matter, which are mix'd with the Matter voided, proceed, the first from the Vessels, that are broke by the great straining, or corroded by the Acrimony of the Humours; the latter from the Ulcers.

This Distemper needs no other *Diagnosis*, than what we have said; and I shall only set down in what it differs from the Bloody Flux: first in a *Tenesmus* is a continual inclination to go to Stool, which is but at times in the Bloody Flux, that is such a one, where the Ulcer is not extended in the strait Gut. In a *Tenesmus* only a small quantity of Slime, mix'd sometimes with some Blood or Matter, is voided; but in the Bloody Flux abundance of Excrements come away together with the Blood, Matter and Slime. In the Bloody Flux is the pain in the middle of the lower Belly with great Gripping; in the other the pain is felt near the Fundament. The Signs of the Causes are these; if it proceeds from a Stone, or an Inflammation, or swelling of the outward Parts, then the Signs of the Stone, or of the said Distempers will appear: If the Acrimony of the Humour, the exulceration, pain, and irritation of the strait Gut near the Fundament Cause it,



it will be attended with the voiding of Blood or Matter. If Worms occasion it, you can only know it by their being voided.

The *Prognosis* of a *Tenesmus* is not dangerous; wherefore *Celsus* says, that this Distemper by it self kills none; which is true, yet it is most commonly outrageous, not of its own Nature, but because of the trouble it brings, as *Galen* says: If the Exulceration in the strait Gut, which causes it, be large, then indeed it may be call'd very dangerous; for then it may easily turn to a Gangreen, or a *Fistula Ani*. A *Tenesmus* is always dangerous to Women with Child, because of the agitation of the Womb, which is so near the strait Gut, and the squeezing of the *Epigastrick Muscles* in the great straining.

This Distemper is cured by Remedies set forth in the Bloody Flux; for what is able to sweeten the Humours in the one, does it also in the other. Bleeding is proper, and may be repeated as the Physician shall think fit; the use of Anodine Glisters is much recommended, to be injected in small quantities, that they may not be troublesome, and with *Laudanum*; they may be made likewise of Milk, or the Decoction of Marshmallows, and the Roots of Lillies, with emollient Herbs; a Fomentation for the Fundament, first lenitive, then adstringent, with Woolblade, which *Riverius* Recommends: Roses, the Rind of Pomgranates, Galls, &c. boild in red Wine: The Ulcer may also be cleansed with a vulnerary Water of a Decoction of Gentian, or Zedoary Roots, the Leaves of Wormwood, Agrimony with Honey: Fumigations also under a Chair without a bottom are approved of; to be made of Frankincense, and Mastick, and a Decoction of the dross of *Regulus* of Antimony. In the mean time at the Mouth may also be given lenitive Medicines, Oyl of Sweet Almonds, Butter, fat Broths, or made with Yolks of Eggs, Coral, Pearl, Seal Earth, Diaphoretick Antimony, Milk, Emulsions with Narcotick Syrup, *Laudanum*; Julips with Refrigerant, a little Adstringent, and sometimes Acid Remedies.

Before the use of the said things, a Purge must be given in form of a Bolus, of Cassia, Tamarinds, Rhubarb, Myrobolans, with the Powder of Licorice, or dissolving the said purging Remedies in a Decoction of the Root of  
 Mallows,

Mallows, Plantain Leaves, Milfoil, the Seeds of Fleawort, and Quinces, and red Roses. But the Glisters that were lenitive in the beginning, must be adstringent in the latter end; the Samples of these we have given before: Some prescribe in this Distemper, a stupifying suppository of Frankincense, Mastick, Saffron, and Opium; if it proceeds from Worms prescribe Remedies against them: After the *Universalis* a Glisters of pure Oil kills them; a Decoction of things that are bitter does the same; if it be caused by a Stone, the cure belongs not to this place; if by an Inflammation of the Bladder, Womb, or neighbouring parts, the Cure must be learn'd where we treat of those Distempers.

## NOTE.

' In a *Tenesmus* they give Glisters of a Decoction of red Ashes with the Flowers of Woolblade; adding Goats Fat, and Honey of Roses, they use likewise a Fomentation of a Decoction of Woolblade in Milk, and Fumigations of the same Plant; as also little Bags with the Leaves of Oak, and Silverweed; distill'd Oil of Wax, as also the Oil of Myrrhe drain'd through the Whites of Eggs, the Balsams of Peru and *Copaiva* do wonders in the Exulcerations of the strait Gut; they praise likewise the steam of Savin boil'd in Water, or Vinegar; a Fumigation of Frankincense and Pitch; Suppositories of Goat's Fat, or thicken'd Honey with the Mass of Hounds Tongue Pills; as also with Opium; the inunctions of the several Balsams of Sulphur, also injections with a little of the same. Some drops of Oil of Mastick in some Mint, Plantain, or Penroyal Water, cures the *Tenesmus* suddenly, says *Hartmannus*.

## C H A P. XVII.

*Of the Hepatick Flux.*

THIS Distemper is rare, as *Sylvius* a very Eminent Practitioner asserts, who says, that he never saw any one afflicted with it; which has made some People question,

question, whether the Ancients invented it, or observed it; yet because most all Authors treat of it, as well as of other Distempers, we may not doubt of its existency, tho' it is very rare: it is defined a sort of Flux, where ferous and bloody Humours, like water that Meat has been wash'd in, are voided by Stool; this is the description which all the Authors unanimously give of it.

The Ancients distinguish this Distemper in Legitimate and Spurious; but this distinction, as having a false Foundation, cannot be good, for it depends upon the greater or lesser imbecillity of the Liver, by which it is unable to make or attract the Blood, or upon the radical moisture, more or less vitiated: all which are mere words. Therefore it is better to divide it in that, which depends upon either Distempers; as malignant Fevers, the Small Pox, the Plague, Hectick and Ardent Fevers, or that which begins of it self, not depending upon any other, at least not a sensible Distemper, or else in Primary or Secondary.

I shall not relate the Causes, which the Ancients say are able to produce this Distemper, because they rely upon false Positions: as that the Blood is made in the Liver, that the Liver draws the Blood from the branches of the *Vena Porta*; that the natural moisture in the Liver is exhausted, not only by the cold, but also the occult temperament of those that are afflicted with this Distemper; all which, and much more, that may be read in *Sennertus* and *Riverius*, fall enough of themselves, not to need any confutation.

I my self, with the better sort of Physicians of this Age, am of Opinion that if the Flux, which is wrongfully called Hepatick, be a Symptom of the abovesaid Distempers, it is only caused by the dissolution of the Blood; by which it may easily slip through the Orifices of the Vessels that open in the Guts, and be voided: In the same manner as we see it come out of the Body through other Passages, the Nostrils, Womb, &c. which blood, because it is altogether liquid, and not easily congeal'd, looks like water that Meat has been wash'd in; but which is the Cause that dissolves the Blood, shall not be said in this place; but where we shall treat of such Distempers, where there is a great dissolution of  
the

the Blood: As in a malignant Fever, the Small Pox, the Plague, &c. But that Flux, call'd Hepatick, which comes of it Self, without any foregoing Distempers, proceeds not from an Imbecillity of the Liver, not able to make, or attract the Blood: nor its occult quality, destroying the natural Moisture, and radical Heat, as *Buteus Varandens* says: But from a *Varicous*, or swelling Disposition; as *Wharthon* will have it in his Book *De Glandulis*; of the Veins, that are up and down the Guts: which is not improbable; for whilst the Capillary Vessels, running through the Substance of the Guts, grow *Varicous*, that is, swell with thick and stagnating Blood; then that, which is Serous, easily slips through the Extended Vessels; and being stain'd with Blood makes the Excrements look like Waters, that Meat has been wash'd in.

There are other Physicians that think the Hepatick Flux to be nothing else than inward Piles, that being open'd emit serous Blood. But I am of Opinion, that this Distemper may as well be a Looseness, that by its Acrimony opens, or corrodes some of the Vessels in the Guts: whence it is no wonder, that serous Humours stain'd with Blood, like Water, that Meat has been wash'd in, are voided.

The *Diagnosis* of this Distemper is wholly contained in its definition; for when we see a Flux, where serous Humours stain'd with blood, that is, looking like Water that fresh kill'd Meat has been wash'd in, we may truly say, that that Distemper by the Ancients was call'd the Hepatick Flux.

As for the Causes: They are known by the Nature, and Condition of the Flux: for if it comes after grievous Distempers, it is to be imputed to the dissolution of the Blood; if it proceeds from internal Piles, that are open'd, their signs, which shall be related hereafter, will shew themselves. If the Humours be voided in great quantity with Pain an Irritation, it is a Looseness, that is serous and sharp, corroding the Orifices of the Vessels; and, if they come not away in such a quantity, you may suspect a *varicous* Disposition of the Vessels, up and down the Guts.



Concerning the *Prognosis*; if the Distemper be secondary, that is, coming upon some grievous Distemper, it is Mortal; but if it be of it self, and proceeding from the other above said Causes, it is not so dangerous.

Of the cure of that Species of the Hepatick Flux, that attends on grievous Distempers, as the Plague, Malignant Fever, &c. We shall say nothing here; for it is the same, that is due to those Distempers; except that in that case you may inject Glysters, that are a little Adstringent, dissolving in their corroborating Medicines, Venice Treacle, Confection of Alkermes, of Hyacinth, or the same Anodine, made of Milk with yolks of Eggs: You may prescribe also cooling and adstringent Juleps and Emulsions with Acids, sometimes with *Laudanum*, or other Narcotics; the internal Hemorrhoids being open'd must be cured with remedies, as shall be said, when we treat of the Piles: If a serous Looseness occasions this Distemper; prescribe the Remedies already proposed in such a Looseness; adding to them, as *Sylvius* Notes, *Diaphoretick* and *Corroborant* Medicines: The *varicous* disposition of the Vessels of the Guts must be removed, by opening and attenuating Medicines; letting always the *Universalis* precede. However this Flux, from what cause soever it proceeds, is stopt or lessen'd by Remedies prescribed in the Bloody Flux, *Tenesmus*, Looseness, and *Passio caliac*; which I shall not repeat here.

#### NOTE.

- ' About the Hepatick Flux we have nothing to add;
- ' for the same things that are used in other Loosenesses,
- ' are proper here.

### CHAP. XVIII.

#### Of Worms.

Treating of the Disorders of the Guts we must not omit that, in which Worms in great Numbers used to breed in those parts, and which creates grievous Symptoms, and requires a cure quite different from any of the

the Distempers treated of already ; whether it be a Disease, or a Cause, or Symptom of one, we leave to the Schools to dispute : We'll think of better things ; and, as soon as we shall have spoke of the various kinds of Worms and their Generation, go over to the Cure. It is certain, that there is no part of the Body, in which Worms cannot breed ; as it happens in the Corps of the Dead ; in parts that are gangreen'd ; verminous Ulcers ; nay in the Gall Bladder, as *Hildanus* shall testify ; the Blood it self, and all other parts ; in which, none excepted, Worms have been found ; as many Observations of Practitioners can witness. Yet these little Animals are more frequently and more copiously lodged in the first Passages, the Stomach and Pipe of the Guts, than any where else : Of these we shall speak chiefly, as properly belonging to the Distemper of the Guts, of which we now treat.

Some of them, which are the most common, are long and round ; these are very often voided by Stool, and sometimes by Vomiting ; and used to breed oftener in the thin, than other Guts ; others are small and thin, like broken bits of Thread, and these commonly are bred in the thick, and more especially the strait Gut ; others, which are very rare, are short and broad, called *Cucurbitini* ; and either separate, or sticking to one another, join'd together ; and then they compose that broad long Worm, that is like a Swadling Clout ; of which the Authors speak, and the Figure of which we may see in *Sennertus* ; these reside in the thick Guts, and are of no different kind from the broad Worm, above mention'd, as I think ; though some Authors are of opinion, that the broad one is one Worm, and not made of several little ones join'd together.

People that are grown up are as well subject to Worms as Children ; though the latter are more frequently troubled with them ; in so much, that when they are ill, Physicians most always accuse the Worms, as they do the *Uterus* in Women : though the Signs shew nothing less than that Distemper.

The material Cause of the Worms, or the Matter of which they are made, the Ancients think is nothing else but a clammy, sweet, and thick Phlegm, made from bad Food, or a vitiated Concoction ; which whilst by rotting

ting in the Guts it is variously prepared, gets a Disposition in its parts, that is apt to produce Worms; others think, that Worms may be bred immediately out of the putrify'd Victuals themselves, without being turn'd into Phlegm; as we see in Fruits, Cheese, Meats, when they corrupt and rot.

The efficient Cause, some say, is the Natural; others the preternatural, and putrifying Heat: and others again say, both of them working by turns; first the putrifying Heat to corrupt the Aliment, and afterwards the natural Heat to breed the Worms; the Reasons of all which *Hypotheses* you may see in *Riverius*.

Others at last run to a doubtful Generation; saying, that Worms are bred in us, no less than in the Earth, and as other Insects by the Heat of the Sun, which is the general Cause; and that so the Effect, as being alive, is sometimes nobler than the Cause. But since the serious and accurate Experiments of *Harvey*, *Malpighius*, *Redi*, *de Graaf*, and others, whom I omit for Brevity, have demonstrated to us, that all Animals, even Man not excepted, took their rise from an Egg; and that these Eggs contained all the lineaments of the Bodys, that afterwards came out of them; ever since I say, there has been no room left for a rational Physician to doubt; but that the Worms in our body have the same Origin. These Eggs, from which these Insects come forth, are swallow'd with our Food, for abundance of them are hid in the Fruits of the Earth, Rye, Wheat, Herbs and other things, as also in all sorts of Meats on which the Flies have scattered them; which being very Minute; so that they make but the eight and twenty thousandth part of the body they came from; are, because of their very little bulk, not always digested and destroyed by the Ferment of the Stomach, and other Concoctions of the body; but remain commonly intire and untouch'd; and afterwards on the least Opportunity, as when they are gone into the blood, they are hatch'd; or in the Guts and Stomach, where it happens frequently, because the Seeds of these little Animals are less changed and altered in the first Passage, where they have undergone but one Fermentation; the gentle warmth of the Place; and temperate Acrimony of the Gall; contributing not a little to the hatching of them:

Wherefore

Wherefore *Helmont* says, where the Gall comes not, that is the Country of the Worms; which is to be understood of the Gall that is very sharp; for that which is not so sharp, and where the Sulphur is Predominant, hinders not the Generation of Worms.

This warmth, or gentle heat and moisture, are required to breed the Worms; for tho' those little Animals are intirely contained in the Eggs, some Agent always is required from abroad; from which they may get motion, they require also some Particles, entring into the Egg, that the Animals may insensibly be augmented by degrees; till they have broke the Shell; and therefore a great and fiery Heat does no good in hatching of these Eggs; but rather harm, because by Acting too forcibly, it disturbs the Oeconomy of those little Animals; nay consumes the moisture which must Concur to their Growth: By the same reason Worms breed more frequently in the Guts, than else where; because in those parts the Heat is always gentle, moist, and consequently fit to hatch Eggs, and breed Worms, to which Children are more subject than those of a Riper Age; but also because of the debility of the Ferment, which makes that the Eggs contained in the Food, are less altered, or dissolved; to which work also contribute the lesser Acrimony of the Gall, and the greediness of Children, which is attended with a less alteration of the Eggs; but not to doubt any more, but that Eggs may be hatch'd within us, the *Ephemerides Curiosor*, *Bartholine*, and other Observators witness that the spawn of Frogs by chance being swallowed in Water, Frogs have been bred in the Stomach, or Guts: So that the Patients have afterwards voided them alive, by Vomiting, or Stool.

It is a remarkable Observation among Practitioners, that Infants, whilst they only Suck, are never troubled with Worms: And that, as soon as they begin to eat Pap, Broth, Mear, or any other solid Food, Worms breed in them presently, the Reason of which is; not that the heat of sucking Children is too weak to hatch the Eggs, as the Ancients say, for they breed in the Dead; nor that the Milk it self turns sower, and so by its Acidity is less fit to breed Worms, as *Riverius* would have it; saying, that Acids kill the Worms; for, if that was true, Worms would



not breed in Vinegar, sower Fruit, &c. which is against Experience, but because Mother's Milk is a purer Aliment, not so full of them Eggs, as having undergone many and various Alterations in the Stomach Guts, the *Pancreas* of *Asellius*, the Blood, the Lungs, the Breast; by which the Eggs may easily be much altered and digested, contrary to what happens in Meat, Bread, Flower, &c. In which that those Eggs skulk, no body dares deny now a days.

The signs of Worms, that is of the long and round ones are; first Youth, because of the gentle and moist Heat, which is, as we have said already, more fit to hatch Eggs. Secondly a stinking Breath, that is sowerish, so that the Women suspect them where the Breath smells sower; which Acidity proceeds from the Aliment, that is rotten, and the corrupt Humours, with which the Worms are mix'd. Stools of a grey Colour, because they have little Gall, and the Victuals are not well digested; frowardness from the Pain of the Stomach and Guts; Watchings, Sicknes, Vomiting, which may be easily Explain'd, itching of the Nose from the sharp Breath tickling the Nostrils in the Expiration: A *Canine Appetite*, from the Multitude of Worms, destroying the Food, and consequently Leanness; because they are defrauded of their Nourishment; unquiet Sleeps, Delirium's, Convulsions, Epileptick Motions, from the preternatural Motion, which the Pain causes in the Spirits; concurring to this Convulsive Matter, which always skulks in the impure Blood of Infants.

The Fever and unequal Pulse are caused by the depraved Motion of the Heart, from the Tumult of the Spirits, as also the succeeding Fermentation of the Blood, caused by the *Heterogeneous* Particles always lodged in the Blood of Infants; and by the the Pain, Watchings, &c. rous'd to Action. Redness of the Cheeks from the Heat, and quick Motion of the Blood in this case; shining of the Eyes from the increas'd motion of the Spirits in the Eyes. But the Cheeks turn blue, and cold Sweats break out, when, by Swooning or Faintness the Motion of the Heart failing, from a Pain, or vellication of the Stomach, the Blood stagnates in the parts, especially the Cheeks, or is not thrust from the Heart to the circumference of the Body

Body : Hence comes the Coldness, and by reason of the deficiency of the Spirits, a relaxation of the Pores, and consequently Sweating.

A Numness and Sleepiness, nay sleepy Distempers succeed also, when the Blood, being agitated by the Pain, Watchings and Fever, a Translation of the Distemper into the Brain, oppresses the motion of the Spirits, and hinders their Flux. *Note*, In the mean time, that these grievous Symptoms commonly proceed more from a bad Constitution of unhealthy Children, than Worms lodging in the Guts. The sign of the broad Worms, or *Cucurbitini* are the Increase of Hunger, and their being voided : But the *Ascarides* are known by the itching of the Fundament, and their being mix'd with the Excrements.

The *Prognosis* of this Distemper depends upon the badness of the Symptoms, and the strength of the Patient. Worms of themselves are not dangerous ; for they are commonly voided alive in great quantities, without any complaints of the Patient gone before : But they portend Danger, when they creep up to the Stomach ; and disturb either that or the Guts.

The cure of the Worms consists wholly in the killing and expelling of them ; because they are altogether Preternatural ; the Exclusion is performed by swallowing things that are bitter, and Glysters of things that are sweet : And therefore Milk with Sugar is very proper for the latter ; as also a Decoction of Raisins and Liquorice, with Cassia and Honey ; and at the Mouth give Rhubarb, Myrobolans, Citron seeds, burn'd Harts-horn, Powder against the Worms ; likewise the Decoction of Grass roots, Wormwood, the lesser Centaury, Succory, Scordium, St. John's wort, because these are all bitter. Among the Syrups, that of Limons, Peach flowers, and Succory with Rhubarb are good ; when you give a Purge add *Hiera Picra*, and Aloes ; which chafes, or kills the Worms ; or else prescribe Senna, with Rhubarb ; adding either *Hiera Picra*, or the Electuary *Diacarthamum* with Syrup of Peach Flowers, or Syrup of Succory, with Rhubarb ; varying the Dose in proportion of the Age of the Patient. Oil given by it self, or with Wine is proper ; but Oil of Hasslewood is more recommended, a drop or two of it may be taken, or a drop or two of Anise-seed-

Oil, according to the Experience of *Riverius* in some Broth. Some Authors mightily extol Quicksilver by it self in a small quantity, not to offend the Stomach, or kill'd with Sugar, and made into a Powder, to be given in a spoonful of Milk, if it be an Infant; or with Conserve of Roses in form of a Bolus; but if you do not like raw Quicksilver so well, or suspect it; give *Mercurius dulcis*; that especially, which is sublimated six times, and call'd by Dr. *Mayerne* Calomel; the Etymology of which was, as it is to many, unknown to our Author; that famous Physician to the King of great Britain, call'd it Calomel from the *French Bellebrune*, which was the Name of a Chymist, that used to prepare it very well: The Dose is from ten Grains to a Scruple; which is mix'd with two or three Grains of *Diagridium* in some Conserve, or the Pulp of a roasted Apple, let their ordinary Drink be Water that Quicksilver has been boyled in; or a Decoction of Grass Roots, Worm or Citron-Seed, or Harts-horn. If grievous Symptoms, or the body's being Plethorick call for bleeding, neglect it not: for Practitioners now begin to bleed Children at the sixth Months end. If the Worms be in the thick Guts, or in the straight Gut, there is no great fear of their creeping upward; and therefore they may be killed by a bitter Decoction; as Gentian Roots, Wormwood, Southernwood, Coral, Citron Seed, &c. or with Oil and *Hiera Picra*, or the Blessed Laxative, always regulating the Dose according to the Age of the Patient.

If there be a Looseness prescribe adstringent Glisters; if epileptick Motions, sleepy Distempers, Deliriums, &c. attend them, they must be cured by their proper Remedies.

The outward Applications, which Authors prescribe, I do not much approve of. After the Worms are expell'd; the ill habit of Body of the Children, which contributes much to the breeding of the Worms, and the Production of various Symptoms; the Patient must be Purged gently, and often.

#### N O T E.

There are many Remedies against the Worms, and of the Simples, Angelica, Wormwood, Southernwood, Dittany, the lesser Centory, Peach Leaves, Fern, Hound

hound, *Contrayerva*, Gentian, Grass, Scordium, Tanfy, Tormentil, Zedoary, the Seeds of Citrons, Ivory, and Hart's horn, Eggs shells, Aloes, Rhubarb, the Seed of Southernwood, Myrrh, Coral; the compound Remedies are Venice treacle, Mithridate, Diascordium, treacle Water, the Spirit of the same, Alexipharmack Water, and the like: *Borellus* recommends the Powder of Orange peel, given to a Dram; as also the Essence of Southernwood to anoynt the Belly with. *Scherchius* relates, that the Seed of Tanfy is the secret of *Ivecherus*; if it be given in Syrup of Violets; to which *Hoefferus* adds the Roots of Primroses: *Baricellus* recommends Spring water, sharpned with Spirit of Vitriol; as also Purslain water, or half a dram of its Seed in Milk; half an ounce of Oil of Olives, and an ounce of the Juice of Pomgranates, with some Sugar for a draught is a secret of *Forestus*; I say nothing of Mercury, because our Author has spoke of it sufficiently. Against the broad Worms, the Root of Fern powder'd, and given to a Dram in the Water of Goats Rue, is in the Opinion of many a potent Remedy. They recommend likewise the Juice of Cresses, the Decoction of Briony roots, the same of Grass with Spirit of Sulphur; *Elixir Proprietatis*, and the extract of Aloes applied to the Belly; distill'd Oil of Frankincense, the Essence of Wormwood; Oil of Colloquintida, Haslewood, Peach stones; a Cataplasm of an Orange, fill'd with the Juice of Wormwood, both the Mints, the Leaves of Peaches, and Purslain; adding the Powder of Aloes, and the Seeds of Colloquintida, with the Gall of a Bull, Soot, and Venice treacle; let them be warm'd, mash'd together, and applied to the Belly, and Loyns. This is the Remedy of the Famous *Lucas Tozzi*, now Physician to the Pope.

## C H A P. XIX.

### *Of the immoderate Flux, and Pain of the Piles.*

**T**O the clearer understanding of this Distemper we must observe; that the Hemorrhoid Veins are of two sorts,



sorts. Some External, that are distributed toward the Fundament, and the end of the strait Gut: these are derived from the *Vena Cava*: viz. out of the Hypogastrick Branch.

The Ancient thought; that these Veins empty'd the superfluous Blood; because that the Blood coming from them was pure and designed for the Nourishment of the Noble parts; which was voided by them only Peccant in the quantity; others are Internal, and come from the *Vena Porta*; and are scattered upon the more upper and inner part of the strait Gut; by which they believed the bad Humours were empty'd, because they thought that the Blood of the *Vena Porta* was more impure and drossy, as being only dedicated to the Nourishment of the parts of the Belly; which is the Sink and Common-shore of the whole Body. This Opinion of the Ancients, the Circulation being once Established, falls enough of it self, not to need any Confutation: Add that if the Internal, as well as External Hemorrhoid Veins had such an Office, of Purging the bad Humours, and emptying the superfluous Blood; certainly every body would be troubled with them inwardly, as well as outwardly, at one time or other: For commonly there are sometimes bad Humours, and sometimes superfluous Blood in our bodies; which are not taken away only by the opening of these Veins; because there are Multitudes, that never had the Piles; and in many more that have had them, they never used to run.

Having said so much before, we may easily gather, what raises the inward as well as outward Piles; which is only the Blood, that is not from the Veins; as the Ancients thought, but from the Arteries in a great quantity brought to the lower and upper, the outward and inward part of the strait Gut, where it remains and runs of a heap, and consequently makes a swelling by lifting, and puffing up the Internal Tunick of the strait Gut, or the Wrinkles of the Fundament it self: which swelling, if it be on the outside of the Fundament, makes the external Piles; but if it be inward in the Cavity of the strait Gut; the Piles are call'd Internal. Several People are subject to this Distemper; that used to be troubled with this Flux of the Hemorrhoids; some every month, some once, twice, three, or four times a Year: As Women have the *Menstrua*, others again never felt this Distemper.

The

The Causes, that produce such a Tumour call'd the Piles, that is such an Accumulation of the Blood, are first among the Adjuvant Causes; the quality of the Blood, a Looseness, and frequent Stools, the Bloody Flux, strong Purges, &c. because of the irritation, which they make in the strait Gut, to which the Blood afterwards flows more copiously; but the Principal, which *Sylvius* thinks to be the only Cause, is Costiveness; for as those that are Costive, void nothing but with great straining; so because of the very great Distension of the strait Gut, from the hard Excrements, the Blood flowing into the Arteries, cannot so well run back through the Veins to the Heart, and therefore stagnates, and is heap'd together; and afterwards produces inward, or outward Piles, according as the parts are disposed. But the Tumour in this part arising from the accumulated Blood, is sometimes dissipated without any Flux of Blood, and it only sheds some Serum; and then they are called *Hemorrhoides Caeae*, or the blind Piles; sometimes these Tumours are open'd, and as it were broke; and the Blood comes forth, either by degrees insensibly, or flows in abundance; and then they are called *Hemorrhoides Apertae*, or open Piles. The Piles have besides this, various differences of less Moment; as to their bulk, figure, number, &c. some are called large, others small, some are many, others but few, and named *Uvales*, *Vesicales*, *Morales*, &c. because they are like Grapes, Bladders, Mulberries, &c. Take notice here, that the swelling of the Piles belongs not to the Veins, or Blood Vessels, as *Riverius* thinks with the Ancients, for Veins cannot swell so, as to represent such figures, and get such a bulk; but this Humour belongs rather to the inward Tunick of the strait Gut, distended by the accumulated Blood, and made Tumid. Many are troubled with these Tumours, which Physicians call Hemorrhoids; and if they are External, may be seen; or if they are Internal they are manifested by the pain, when the Excrements pass by, and most some Blood, that commonly comes away with them. Several are subject to the Piles by an hereditary Disposition; others without it. The Piles may and must be distinguish'd from several other Tumours of the Fundament, that are like them, such as the *Rhagades*, *Condylomata*, *Fici*, *Thymi*, &c.

*Rbagades* are chaps in the Fundament, like those, which the violent Cold occasions in the Hands, Lips and other parts; *Condyloma*, is as it were a long fleshy Excreescency, proceeding from the Humours, falling upon wrinckles, and prolonging them. They are less than the piles, neither are they so red, painful, bleeding, or round. *Thymi* or *Porri* are little fleshy swellings, that come not only in the Fundament; but also upon the Privities of Men, and Women, like little Warts, and are white, or reddish without pain. *Fici* are also little swellings, but exceeding the *Thymi* in bigness; they are livid, painful, and hard, approaching to the Nature of a Cancer, and are used to Exulcerate like Cancers. To these we might add those Caruncles, which the *Italians* call *Criste*, because they look like CocksCombs, they are common in *Italy* because of the *Præputia Venus*: All which Excreescencies being Surgeons business, we shall not treat here of their Cure: In a word the Piles are sufficiently distinguish'd from all these Tumours, by being swell'd with Blood; besides, they bleed, they swell by degrees with Heat and Pain, are discuss'd in time, and most commonly return at certain times.

The Piles for the greatest part are wholesome to People in Health; if they come without disordering the Body, especially to those that are used to them: Sometimes also they are Critical; when they come in Diseases, so that the Blood which runs from them relieves the Patient, and then they seem not to require any Cure. But when they are too painful, and torment the Body very much; because of the Matter that copiously flows to them from the Blood, their Distension, Heat, and as it were Inflammation: Then they fall under the Physicians Consideration; or also when they bleed too much, and that the great Evacuations weaken the Patient, as is usual to all other Hemorrhagies.

The Piles commonly are of no danger, yet sometimes by reason of the great Pain, Watchings, and from thence a Fever, Inflammation, and Gangreen following they are very dangerous; or when they suppurate and extulcerate, they easily turn to a *Fistula*, that is Incurable; because of the softness, and moistness of the Part, which is so contrary to the drying up of the Ulcer.

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As to the cure of the Piles, if they are critical, or such as are used to return at set times, they want none; for their swelling commonly, either by the flux of the Blood, or the transudation of the sanguine *Serum*, decreases by degrees, and is at last quite dissipated. But if they are extraordinary painful, or if open they bleed excessively, then they require Medicines to mitigate the pain, and stop the immoderate bleeding, which weakens the Patient very much. The best thing to assuage the pain is bleeding in the Arm, to make a revulsion; for when the Vessels are empty'd a little, the *Plethora* or superfluity of Blood, which commonly occasions this Distemper is taken off, and the Flux of Blood toward the lower parts is diverted: This bleeding is to be repeated more or less, according as the Physician shall think fit, or the Pain, Inflammation, *Plethora*, Strength, and Age require. I am not for bleeding in the Anles, nor cupping upon the *Hypochondria*, or the Hips, which seem to do more harm than good: Strong Purges also are improper; for it is to be feared, that they may draw by their irritation the Humours toward the afflicted part, and consequently augment the pain and swelling; yet there is a danger on the other side, and for fear the hard Excrements might exasperate the pain in the going to Stool, the Body is continually to be kept open. Therefore dissolve the Pulp of Cassia in a Decoction of Roots of Marshmallows, the Leaves of Mallows, Lettice, Licorice, purging Raisins, and red Roses. This Decoction must be given in the Morning, and at Night a good while after Supper.

As to Glisters, if they are strongly purging, they must for the same reason not be used; but only be made lenitive of Milk, with the Yolks of Eggs; emollient Decoctions with Oil of Lillies, or Sweet Almonds, adding the Seeds of Fleawort, and Quinces extracted in Rose-water; *Laudanum*: or also a Decoction of Sheeps Guts; which Glisters yet, if the Piles be outward, must be seldom administred, especially if the great swelling hinders the entrance of the Pipe. In that case, if there be a necessity for Glisters, they used to cover the Pipe with the Gut of a Chicken, that it may less offend the Tumour.

Inwardly may be given Emulsions with Syrup of Violets,



lets, the Narcotick Syrup, Oil of Sweet Almonds, the Decoction of Milfoil; for his ordinary Drink Broth with emollient Herbs, and cooling also, if there be a Fever, or hot temperament join'd with the Piles. In the mean time, because the Cure requires chiefly outward Applications; Sitting in Milk, Oil, or an emollient Decoction is proper in the beginning to mitigate the pain. If they are very much swell'd, that is, when they are outward, Leeches may be applied, that part of the Blood which makes the Tumour, may be evacuated; a Cataplasm of Crum of Bread is also good to assuage the pain; as also a Suppository of Goats Whey and Opium; Oil of Eggs, of Linseed, Box, &c. to anoint the part with; Poplar Ointment with Opium, Balsam Sulphur; wild Flax boil'd and beaten with Hogs Lard, Onions, or Leeks boil'd, mix'd and beaten with Butter or Fat, are recommended by the Authors: Pilewort or Figwort likewise taken inwardly, or applied to the part mitigates the pain. Also a Fomentation of emollient Roots and Herbs, adding the Leaves of Woolblade; when there is occasion to consume and disperse the Piles, Fumigations are of great use: viz. the steam of Wine, Brandy, the Decoction of Woolblade, Houseleek, or Wine that hot Bricks have been quench'd in, or a Decoction of the dross of *Regulus* of Antimony. Besides the said Remedies there are many more that may be seen in the Authors, which I for brevity's sake omit. If the Cure be not to be directed against the pain, but their excessive bleeding, which sometimes is very difficult to be stop't; then after bleeding, repeated as often as there has been necessity for it, which is of use here to make a revulsion, prescribe adstringent Juleps and Broths, adding to them sometimes Narcoticks: Let his Victuals be of Barley, Almonds, Rice, &c. keeping to the liquids aforesaid: Adstringent Glisters must be injected, such as we have prescribed for a Looseness; Oxycrat may also be given in form of a Glisten; Sitting in, and fomenting with an adstringent Decoction, or Oxycrat; the juice of Plantain Leaves, Woolblade, Shepards Purse, Nettles, for a Glisten, or in a Cataplasm; as also Bole-Armoniack, Dragons Blood, Frankincense, with Cobwebs, Hares-hair, Seal-Earth; adding Vitriol powder'd, if you would have it more adstringent:

adstringent: if you would stop the Blood quite, apply Clothes wetted in a solution of blue Vitriol. Finally, if the bleeding be very obstinate in external Piles, use a hot Iron, or let the Patient lie upon his Belly, and the part be touch'd with Spirit of Vitriol, and other things convenient in all Hemorrhagies, and found every where in the Authors. But if the Piles Gangreen, they are to be tied, cut, or burnt off. In the mean time the Mass of Blood must be considered, and according to its disposition proper Remedies administred, as Baths, hot and cold Mineral Waters, &c.

## N O T E.

‘ The Hemorrhoids being softened with bathing and Fomentations, are after the *Universalis*, opened by Fig and Mercury Leaves. If these suffice not, you must use the Juice of Sowbread, either alone, or if there be an Inflammation, mix'd with the Juice of Beet: Add the Juice of Aloes, outwardly applied; as also a Liniment made of Cray Fish, boil'd in Oil to the consistence of Honey; especially if there be any fear of an Inflammation, and then let it be rub'd in a Leather Mortar till it grows black. The Juice and Mash of dead Nettles opens the blind Piles. Momordica, and after that, Woolblade, the Flowers of Elder boil'd in Water, or rather Milk, are Specificks against the pain; when the pain is very sharp you may use likewise the Seeds of Henbane, the Leaves of Purslain; Oil in which the Berries of the Herb *Paris* have been boil'd; as also that which is squeez'd out of the Seeds of Henbane, with Hoglice and black Beetles; which is good in outward and inward Piles, if the Suppository that touch the part be anointed with it. The ashes of burnt Cork with Oil of Myrrhe and Linseeds is a Specifick: and so are several Mucilages, with the addition of a little Opium; a little bag with the Leaves of Oak and Acorns bruised and boil'd in Vinegar, Balsam of Sulphur there brutinated, or made with Oil of *St. John's* Wort, the Root of Pilewort gathered in the Autumn, in Substance, or in a Decoction; nay some will have it only wore near the Huckle Bone, others Fry it in Butter, and make an Ointment: Some order the Herbs and Roots of wild Prickmadam infused in Wine, or  
‘ any

any other proper Liquor, to be taken Mornings and Nights.

When the Piles bleed too much, a Syrup of the Juice of Asses Dung is very much esteemed; as also a Fumigation of Bdelium, and the Powder of a land Frog, or the Powder of a burnt Toad applied to the part; the Fat of Eels that runs out in the Roasting, a Girdle of the Leaves of white Hellebore sow'd in Linnen, is of singular Efficacy in exulcerated Piles; an Ointment of Oil of Sweet Almonds, and *Aurum Fulminans* is likewise much recommended.

## C H A P. XX.

### *Of the hot Temperament of the Liver.*

**T**HAT which is call'd the Temperament of the Liver, whether it be hot or cold, always belongs to the Blood, and not to the Liver; neither have the parts any heat or cold but from the Blood, which is the true inborn Heat, and the treasure of Life, because of the motion it has within it self, namely, the Fermentation; and the circulating motion, in both which Heat and Life consist. Which, how true it is, appears in the tying of an Artery, or any other cause that stops the Fermentation or circulating motion in any part, where presently the parts or the whole Body grow cold, and at last lose sense, motion, and life.

The Ancients divided the Temperament of the Liver in Simple and Compound; the Simple has four Branches, hot, moist, &c. the Compound has four likewise, moist and cold, dry and cold, &c. but these divisions cannot be right if the Temperament be in the Blood, because it is liquid, and consequently the fault of it can never be in the dryness, whence its Heat and Frigidity are only to be considered.

The Ancients divided the Temperament also in that, which was joined with Matter; and that which was not; But who sees not that this division is vain and silly? for how can a Heat and coldness be raised in any part, but by the presence of a cooling or heating Body? by which it is evident, that the Temperament in the parts is always

ways joyn'd with a matter, *viz.* the Blood, or the Humours derived from it.

But tho' the hot Temperament, of which we treat here; for the cold Temperament may be easily understood, and cured out of a Cachexy, the Greensickness, and other cold Distempers; tho' I say the hot Temperament exceeds not its natural State, or manifestly offends the Actions, that it may be call'd a Distemper; yet because it most commonly disposes the Body to hot Distempers; and causes some, tho' not always a very sensible Action. Therefore, after we have recited its Causes, we shall shortly propose the necessary, and proper Remedies to correct it.

As for the joyn'd cause of this Temperament, it is the bilious sharp Particles, together with the Spirits abounding in the Blood; for these are its active Principles, on which its Heat, and Motion depend; as its Frigidity upon the defect of them. But the external Causes, which set the other to work are; a hot Air, hot Food, Exercise, Watchings, Anger, Wine, and hot Liquors, &c. which how they heat the Blood is easily understood.

The signs that indicate such a Temperament, are loathing of Victuals; because of the exaltation of the Gall in the Blood, drought for the same Reason: Costiveness caused by the heat of the *Viscera*, drying the Excrements; a spare Body, more inclined to be Lean than Fat; because of the dissipation of the parts, and the propensity to a Fever.

The Cure, or rather the mending of such a Temperament is performed by Bleeding; a Purge of Senna, Tamarinds, and Rhubarb, in a Decoction of Sorrel, Succory, Lettice, &c. dissolving in it Manna, or Syrup of Succory, with Rhubarb, or some grains of Jalap; or the Royal Pissane of the infusion of Senna with Apples, or Limons, Crystal Mineral in Spring water; taking it often, Glysters, whilst the body is bound, ought to be given, first Emollient then Cooling. Juleps of the refrigerent Water, or a Decoction with acid Juice, or Spirits. The Diet must be Cooling and Moistning: The Drink, Barley Water sharpened with the Juice of Limons, cooling Broths may be prescribed for some time, likewise the Julep call'd the Alexandrine for some days. Milk  
Whey



Whey for fifteen days, Mineral Waters, and Bathing perform the Cure, with many other Remedies to be met with in Practical Authors.

## C H A P. XXI.

*Of an Inflammation of the Liver.*

**S**INCE an Inflammation of the Liver is no other, than the Inflammation of any other part, we shall not treat of it largely; for since the Nature, and Cause of it are the same with those which before we said were fit to produce an Inflammation of the Stomach; *viz.* an Affervescency, the Superfluity, Viscidity of the Blood, a Contusion of the Liver, &c. not to do the same thing over again, and to repeat what has been said already, the differences of the Causes, as well Internal as External of an Inflammation of the Liver, must be fetched out of the Chapter of the Inflammation of the Stomach; nay the manner how an Imposthume, and Ulcer follow upon an Inflammation of the Liver, since it is not unlike that, by which they are raised in the Stomach, their *Ætiology*, or manner of being produced, may be likewise gather'd from what we have said of an Imposthume and Ulcer, following upon an Inflammation of the Stomach. So that we shall only relate some differences of the Inflammation of the Liver, and then go over to the Signs, and Cure.

The difference of this Inflammation is in respect of the place, for sometimes it invades its Convex, sometimes its Concave Part, sometimes its Substance or Parenchyma, sometimes the Membrane or its superficial Part; in respect of the Tumour, some Inflammations are of the Nature call'd *Phlegmonick*, some of that call'd *Erysipelatick*, and a third sort are mix'd; as we have said of the Inflammatory swelling of the Stomach.

The *Diagnosis* of this Distemper is learn'd from several Symptoms. The first is a heaviness in the right *Hypochondrium*: which is felt chiefly, when the Patient turns from one side to another: because of the Liver's being stuff'd with Blood retain'd by reason of the Inflammation, which hinders its Circulation. The second is a heavy Pain, if the Inflammation be in the substance of the Liver; because

cause the *Parenchyma* is not so nice of Sence ; or else a more sharp and pricking Pain, if the Inflammation be in the Membrane, or the superficial Part of it ; because of the distension of the Membrane, which is more sensible. This pain reaches to the Ribs, nay quite up to the Throat ; when the Inflammation being in the convex part of the Liver, is communicated to the short Ribs ; which it touches, or extended as it happens commonly to the other Ribs. The third is a Fever, the companion of all Inflammations, which is either Essential, when the Blood lies down in the Liver, because of the Fermentation, raised from the *Heterogeneous* parts in the Blood, or any other cause : Or *Symptomatick*, when the Blood first staying in this Entrail by what cause soever, because of the Fermentation and Heat it undergoes in that part, communicates some *Effluvia* to the Blood, that circulates there, which raise it to a preternatural Motion. The fourth is a difficulty of Breathing ; not only occasion'd by the weight of the Liver, augmented by the Inflammation and its being stuff'd, drawing the Midriff downward, and hindring its going upward ; but also caused by the Inflammation, that when it is in the convex part of the Liver, is communicated to the Midriff ; which makes, that the same cannot duly assist in the Expiration.

To these signs others are added, to render the *Diagnosis* more certain ; such are the Patients ease in laying backward ; because in that posture the Tumour is not so much squeezed ; a violent Drought, caused by the hot *Effluvia*, that get up to the upper Orifice of the Stomach, and the extremity of the *Oesophagus* ; as also by the hot Stream elevated from thence to the Throat, or likewise by the Fever : A blackness of the Tongue for the same Reason : Costiveness sometimes, because of the Liver's being stuff'd up ; which hinders the straining of the Gall, that is used to irritate the Guts to Stools ; or of the *Sulphureo Saline* Particles reaching from the Inflamed part to the Stomach ; especially if Inflammation be in the Concave part of the Liver ; a pale and yellowish Colour all over ; because of the Galls redounding in the Blood, and as it were returning back from the Obstruction of the Liver ; the Urine, which is higher coloured than ordinary, from the great mixture of Gall strained through the Kidneys from the Blood, that is loaden with it. A

A dry Cough ; either caused by the Irritation from the Inflammation, communicated to the Epigastrick Muscles, that have a great share in the Coughing ; or by the sharp bilious Serum, distill'd from the Blood upon the Lungs, and consequently Vellicating them, to regain the free Circulation, which is hindred in them, because of the Respirations being disturbed. As for the hard and sawing Pulse ; I believe it more Imaginary, than true ; for the better sort of Physicians confess, that they have never observed it:

But it is not enough to know the Principal Signs of an Inflammation of the Liver ; unless we can distinguish it also from the Inflammations of other Parts ; as that of the Epigastrick Muscles, the Mesentery ; as also from a Pleurisy. In an Inflammation of the Muscles the Skin is very much stretch'd ; and the Swelling imitates the Figure of the Muscles ; so that if the strait Muscles are inflamed, the Swelling is oblong ; and if the oblique, or transverse Muscles be inflamed, the Swelling is accordingly : which happens not in an Inflammation of the Liver : Besides, there is more Colour on the outside, which commonly looks red, the Face is not so yellowish, which of all the Signs is the most certain of an Inflammation of the Liver.

So *Galen* and *Valeriola* by the Absence of this Sign discover'd an Inflammation of the Muscles ; tho' other Physicians suspected it to be of the Liver : an Inflammation of the Liver is distinguish'd from a Pleurisy, by that in the latter the Difficulty of breathing is greater, the pricking pain only in the side, and the Cough more violent ; the Spitile is Bloody, and the Colour of the Face red, not yellow as in the other. But an Inflammation of the *Mesentery* you may know from one of the Liver by the Swelling, which in the latter lies deeper, and in the Umbilick or Hypogastrick Region ; as also by that there is no change of Colour.

As for the *Prognosis*, an Inflammation of the Liver is always full of Danger ; for it commonly ends in a Consumption or a Dropsy ; because the Circulation is hinder'd by the Liver's being stuff'd up, or the Gaul's not being strain'd through it : That which invades only the lower part of the Liver is more dangerous than that which comes in the external and superficial part. *Riverius* says, That the

the Inflammation of the convex part of the Liver is more dangerous than that of the concave part : Yet I am of Opinion, that an Inflammation is as dangerous, if not more, in the concave, as it is in the convex part ; because it is communicated to the Stomach. An Inflammation of the Liver is either discussed and resolved, or in tract of time comes to a Suppuration ; and so becomes an Imposthume, from which few escape ; unless it be small, and in its outward Surface under the Ribs ; for then, especially if the Tumour and Fluctuation appear, it may be open'd with a hot Iron, or a Corrosive, to let the Matter out, which if it be good there is hope, but if it be corrupt, or like the Lees of Oil, the Sign is Death. That it becomes to be an Imposthume is known by the Remission of the Symptoms ; if the Imposthume breaks and it becomes to be an Ulcer, it brings a slow Fever, a Dropsy, and Consumption : Such an Ulcer may also be produced like an Ulcer of the Stomach, without any Inflammation preceding it, by sharp and corrosive Humours, falling upon the Liver, as upon other parts ; an Ulcer in the Liver is hard to be discovered, that is, when it proceeds not from an Inflammation ; yet it may be known by a pain in the Right *Hypocondrium*, with a slow Fever, Consumption and Yellowness. The Signs which *Riverius* alledges, as bloody and mattery Stools, mattery Urine, pieces of the Liver voided by Stool, are merely fabulous ; for they cannot be, unless the Guts be affected.

The Cure of an Inflammation of the Liver ought to be the same as one of the Stomach ; as bleeding, cooling Juleps, cooling and emollient Glysters, gentle Purges, which may be more safely prescribed here than in an inflammation of the Stomach ; Narcoricks, if there be Watchings ; cooling and adstringent Fomentations in the beginning ; afterwards resolving, and at last emollient ones, if the Inflammation tends to a Suppuration : In a Word, all what we have prescribed in the Inflammation of the Stomach ; the Juleps, Drinks, and other things, are here of the same use ; nay the Imposthume and Ulcer are not to be cured otherwise, than by Remedies there prescribed ; unless the Imposthume, as we said before, be in the external and foremost part. Then the Suppuration may be promoted by Suppurating Plaisters and Ointments ; Gum



Ammoniack, Galbanum, Diachylon with the Gums, emollient Cataplasms; after that the Swelling is to be open'd by cutting, or burning, to let out the Matter; then the Ulcer is to be cleansed, as all other external Ulcers, by Remedies that are moistning, and sweetning the Acrimony of the Humours; as Milk, bathing, &c. the use of Turpentine, or Balsam of Peru, or of Sulphur made with Oil of Turpentine, &c. and other things that are usually prescribed in Ulcers of the Lungs. If the Inflammation proceeds from the Viscidity of the Blood; which may be seen by the Blood drawn out a Vein: then, the Fever being laid by bleeding, gentle Sudorificks may be often administered.

## NOTE.

In an Inflammation of the Liver the same things are proper that are used in a Pleurisy.

## C H A P. XXII.

*Of an Obstruction of the Liver, the Jaundice, and a Scirrhus.*

**T**reating of the Obstruction of the Liver, we shall comprehend in this Chapter all the other Obstructions at the same time, that are incident to the *Viscera*; as that of the Milt, the *Pancreas*, the *Mesentery*, and the Womb; for they differ not, either in the antecedent, or the join'd Cause, and they require the same Cure. Add to this, that these Obstructions are commonly complicated; so that the Blood which in one place produces a Stoppage, and by its Thickness is apt to stay by the way, stagnates and stops likewise in another; because the Circulation is hindred in the same Manner. But by Obstruction I mean not a total shutting up of all the Vessels by thick Blood, for then an Animal could not live long for want of Circulation, without which Heat and Life cannot subsist; but we must only understand by it a Disposition of the Mass of Blood, that partly hinders its progressive and circular Motion; that is a Disposition which makes that the Blood circulates but slowly in those parts, and seems in time to stagnate; or if it be a total Obstruction, and stoppage of the Capillary Vessels, yet it is not

in all the Vessels (for then, as we said before, the Circulation would cease) but only in some; having said thus much before, I shall not, as *Riverius* does, waste my time in examining what Disease an Obstruction is, whether it be *Similar* or *Organick*; for such Questions belong to the Schools, I shall only propose its Causes, and establish a *Diagnosis* and *Prognosis*, by which the Cure may be made easier.

The Causes then that are able to make Obstructions in the Body are of two sorts; some are Internal, others External; an Internal Cause is the Blood being thick or viscous in its Constitution; that is, too much loaded with a viscous *Lympha*, or acid Particles; or when it is too full of dissolved Salt, which makes that, when it has not its due fluidity, it cannot freely flow through the Capillary Vessels, of which the Liver, Milt and Womb are composed; and so stays by the way, and consequently causes Obstructions; such Obstructions may also be produced in the said Parts by Ulcers, little Stones, Scirrhus and other Tumours; which how they do it wants no Explication: But in the Liver an Obstruction is chiefly caused by the Gall it self, which is to be strained through its very little Glandules, of which the Contexture of the Liver consists; for when it is made too thick and oily by a gross Sulphur mix'd with Terrestrial Parts, it may easily stick in its Strainers, and so at last stuff up the whole Liver: The Quantity of Humours, as also of Wind, which *Riverius* reckons among the Causes of Obstructions, seem to me not properly able to produce Obstructions. As to the Winds there is no doubt; besides that I cannot conceive how Winds can be raised in the *Viscera* for want of room; I see not which way they can shut up and stop the Capillary Vessels: but the copious quantity of Milky Humours, or Blood; though it is able to retard the Circulation of the Blood; because of the Ingurgitation of the Heart, its aggravation, and the Defect of room, in which it is contained; that, I say, cannot properly be call'd an Obstruction, because it belongs not to the *Viscera*, but to the whole Body.

Besides the said join'd and internal Causes of Obstructions, there is another, that is an occasional one; which makes commonly, that the Obstruction is raised rather in one Entrail than in another. Such is a loose contexture of the Liver, Milt, or Womb, fit to gather Humours; such are Inflammations, Tumours, Ulcers, &c.

The External Causes of this Distemper are, thick foggy Air; gross, acid, hard Victuals, that are unfit for Digestion, and cold, Wine that's full of Tartar, a sedentary Life, Sadness, Sorrow, a depraved Digestion; in a word, all what is able to thicken the Blood, and to take away its fluidity. The *Diagnosis* of Obstructions is generally fetch'd from the hardness and Distension of the *Hypochondria*, a difficulty of breathing, especially in doing of any Exercise or Climbing; a laziness all over, a slow and weak Pulse, a Sense of Heaviness in the *Hypochondria*, the Difficulty of breathing increasing after Meals, Costiveness, &c. If an Ulcer has occasion'd this Disease, it shall be manifested by Leanness, a slow Fever, &c. if clotted and coagulated Blood has caused it, it shall be known by a melancholy Temperament, and other Signs of the Superfluity of Acids in the Body: If it proceeds from glewish viscous Blood, it will appear if you open a Vein: And lastly, if it comes from a thick oily Gall, the Body shall look yellow, and of a Citron Colour, and the Appetite shall be dejected: From these things you may gather the Theory of that Distemper call'd the Jaundice, which proceeds from an Obstruction, and is nothing else but a vitiated Colour of the whole Body, the White of the Eyes not excepted; which is commonly yellow, with an itching all over, and then call'd the Yellow Jaundice, or the Royal Distemper; but sometimes, though more rarely, the Colour is Black; and then it is call'd the Black Jaundice. I shall not meddle here with the Question, which commonly is made, Whether it be a Distemper, or a Symptom?

Most all Physicians agree, that the Cause of this Distemper is a Stoppage and Obstruction of the Liver, or of the Biliar Duct, and the Passage call'd *Cholidocus* by the Gall, when it is too viscous and glewish, a small Stone, or any other Cause, by which the Gall, when the Liver, or its excretory Ducts, which all belong to its Separation, are not able to filter and strain it; returns back to the Blood, where it is continually made, and at last superfluously abounds; whence the Blood copiously impregnated with it, gives a Yellow, and sometimes a greenish Colour to all the Parts, according to the Quantity of the Gall it self, and its various Degrees of Exaltation: yet it seems to me most commonly not to have a Hand in it; at least alone it cannot produce the Jaundice unless there be also that Constitution in the Blood which shews, that the

the Sulphur, or Sulphureous Particles are predominant; yet that they are gross, drossy, and not very salt: and consequently not very apt to produce Fevers and other Symptoms: otherwise the Jaundice would be seen in every Obstruction of the Liver: the falseness of which is manifest in Hypochondriacks, that look pale, and have no yellow Colour about them; nay *Sylvius* testifies, that the Jaundice may be produced without an Obstruction of the Liver, or any of the Ducts through which the Gall is strained and asserts, that in dissecting those that died of the Jaundice, most commonly he found no Obstruction in the Liver, or the *Cholidocus*, and Biliar Ducts; and that several People that had the Jaundices voided yellow Excrements. In those cases the cause of the Distemper is not an Obstruction; but only a great quantity of decay'd and unactive Gall, that infects all the Blood. The Truth of this is proved by the biting of Vipers, or other venomous Animals, which presently causes a yellow or Citron Colour: yet that proceeds not from an Obstruction, but only a very fermentative and dissolving Humour, by the bite or sting got into the Blood; which whilst by the Circulation is communicated to the Heart, and the whole Mass of Blood, from the great Power it has of dissolving the Blood, grows as it were more Bilious; for the Gall and the red part of the Blood differ not, but according to the greater or lesser Attenuation, and breaking of the Parts. As to the bad disposition of the Liver, which *Riverius* accuses in the Jaundice, if it consists in an Obstruction, Ulcer, or Inflammation and Stoppage, well and good; for that way it may dispose the Body to the Jaundice, as we said before, but not by its cold Temperament, or Debility; as some Authors say, for then it would rather produce a Cachexy.

Besides these there are other External Causes, which are able to bring this Distemper; as violent Medicines, or Poyson; for they act in the Blood in the same manner, as the biting of the Viper, only with less force; that is, by too much dissolving the red part of the Blood; and disposing it, altering the site of the Parts, to a yellow Colour; *Sylvius* has observed also that the Jaundice has been caused by the Excessive use of Brandy, and other Liquors: Which how Predomenant they can make the Sulphur in the Blood every body knows.

The black Jaundice depends not upon the Spleen, as the Ancients would have it, but upon the Blood only; as the yellow Jaundice, which it commonly succeeds; this is caused



from no other Humour but the Gall, which is spread all over the Circumference of the Body, endued not with a Yellow, but a fuller and blackish colour; because its Particles are more attenuated, and by the length of the distemper wore and burnt like a Coal.

The Jaundice is known by the yellow or blackish colour infecting the skin of the Body and the Eyes, a Costiveness, whitish Excrements that are not stain'd with the Gall; an itching all over, a bitterness upon the Tongue, a laziness of all the Body, and other things denoting a stoppage of the Liver.

A *Scirrhus* of the Liver; by which also may be understood *Scirrhus* Tumours in any other part of the Body, is a hard resisting swelling without pain; (for if it pains it is an exquisite and confirm'd, but an improper and a spurious *Scirrhus*) arising in the substance of the Liver from a hardened and coagulating Humour.

This Tumour is commonly made by a gathering, that is, by a Matter insensibly heap'd together by degrees in this entrail, tho' I deny not, but it may sometimes be made consequently by an Inflammation; its thinner parts being dissolved, whilst its thicker parts are hardened. The join'd cause of it is the Blood, which is Thick, Terrestrial, Viscous, Lymphatick, apt to stick and coagulate in the capillary Vessels, and to be hardened in the *Glandules* that strain the Gall; concurring to this not a little the *Lympha*, that as it were ties and more strictly unites the terrestrial parts of the Blood; as also the Glewish Gall, that is too clammy; the external Causes are gross, earthly, viscous, acid Victuals, a thick Air, and others of the six unnatural things; as also a contusion of the Liver caused from without.

The Signs of a *Scirrhus* are a resisting hardness in the right *Hypochondrium*, a much greater heaviness, and weight, than in an obstruction, no Fever; nor pain but what is small, the Face commonly looks pale, and the Body emaciated.

The *Prognosis* of an Obstruction, and *Scirrhus* of the Liver must always be bad, if those Distempers be inveterated in Cacochymick Bodies; but they are of less danger, if they are newly come, and invade robust Bodies: A *Scirrhus* succeeding the Jaundice is mortal. The Jaundice, that is caused by Poyson, the bite of a Viper, an Ulcer, or an Inflammation, is more dangerous, than that, which simply proceeds from an Obstruction.

An Obstruction of the Liver is cured by attenuating Medicines, such as are able to thin the Blood ; as Apozemes that are opening, and at the same time Purging ; fix'd and volatile Salts ; Treacle Waters, spirituous Liquors, Aromatick and bitter Herbs ; as Succory, Fumitory, Charvel, Cresles, both the Wormwoods, Chalybeat Water, the Filings of Steel, the Saffron or Salt of Mars, in Broth or an Opiat : Salt and Spirit of Tartar are much recommended : aperient Broths may also be prescribed for some time : All Acids must be shunn'd ; Bleeding, unless a *Plethora* or some other sign requires it, is of no use here ; Mercurial things, especially *Mercurius Dulcis* is of great virtue ; the Bezoartick Mineral, as also hot and Diaphoretick Medicines, Wine, Cinnamon, Saffron, Confection of Alkermes, and other things obvious in the Authors.

The Patients are often to be purged, sometimes with pretty strong Positions, sometimes by Pills with Gum Armoniack ; prescribing likewise now and then strong Glisters : a Bath of fresh Water, emollient Fomentations, and lastly Mineral Waters, that are impregnated with Steel. The Jaundice proceeding from an obstruction, must only be cured by the said Remedies, intermixing them with some that are call'd Specificks ; as are your Juice of Horehound, Nettle Roots, Wormwood Wine, a Decoction of Woodroof Root, Tetterwort, Agrimony, Hempseed boil'd in Milk or Whey ; Soap given in hot Broth, or Milk to a Dram, Saffron, and the like ; but if there be no obstruction in the Liver, which may be seen by the Excrements stain'd with the Gall, then to restrain the quantity of the Gall you may prescribe Acids ; but that happens very seldom. But when the Jaundice is caused by the bite of a Viper, apply Cupping Glasses to the part affected, and Venice Treacle dissolved in Brandy ; prescribing in the mean time volatile Salts, the Powder of Vipers, Venice Treacle : when it proceeds from Poyson taken, give Fat things, Milk, and other Remedies which we have formerly prescribed to break the force of the Venom.

A *Scirrhus* besides all the Remedies proposed in an Obstruction of the Liver seems to require nothing else but an emollient Fomentation of the Roots of Briony, and wild Cucumber, with the Leaves of Wormwood, Mint, Feverfew, Wallwort boiled to mass ; adding oil of Capers or Tamarisk, or Worms ; or a Fermentation of a Decoction of the same ; also a Plaster *de Vigo*, with a four double quantity of Mercury

applied to the Region of the Liver, and wore a great while is of great use: So is likewise the Spirit of Turpentine given in Broth, or some other convenient Liquor.

## N O T E.

‘ In the Obstruction of the Liver, as in most Obstructions of the other *Viscera*, it is safest to begin with Bleeding; that the Circulation of the Blood being made more free, the opening Medicines may operate the better: Among these, besides what our Author has alledged, are the tartarous Pills of *Bonatus*, the Troches of Rhubarb, the infusion of the same with Sal Prunel, and other things made of Rhubarb; the Electuary of Worms of Dr. *Mayerne*.

‘ In the Jaundice the Seed of Celandine Powder’d, or given in an Emulsion, is a Specifick; as also the Decoction and Powder of Earth-worms, and the Electuary of *Mayerne* above-mention’d, the Dung of several Animals; as Dogs, young Geese, Chickens; the Juice of Goats Dung squeez’d in Milk, the second bark of *Barbary* Wood; the Stone that is found in an Ox’s Gall Bladder; as also all Martial Remedies mix’d with Purges, and especially that which is call’d the Soul of the Liver of *Mayerne*. Note, That here likewise you must begin sparingly and seldom; for they only relieve the Patient for a time; and there is not to be expected so much benefit from their use, as the abuse of them may do harm; Wine is likewise not very safe, and ought only to be prescribed in a small quantity, and temper’d with water. I have known some that have found themselves very well by drinking nothing but water for their ordinary Drink. The use of Milk, and especially Asses Milk, is not to be rejected, the Body being first prepared.

## C H A P. XXIII.

## Of the Dropsy.

**A** Dropsy in general is nothing else but a Collection of Water; or Serum in our Body, that is extravasated; for as long as it is contained within the Vessels, it cannot properly be call’d a Dropsy. The Ancients divided it in particular and universal; a particular Dropsy they call’d that, when waters were gathered in some particular parts of the Body; as in the Cods, the Breast, the Head, the Womb; and thence proceed the

the various Names, as *Hydrocele*, a Dropsy of the Breast, of the Head, of the Womb.

An universal Dropsy they call'd that which invaded the whole Circumference of the Body, or the *Abdomen*: wherefore of this they made a triple difference; they call'd it *Ascites*, when the Serum fill'd the whole Body of the *Abdomen*: A *Tympanites*, or a dry Dropsy, when the same Cavity was not fill'd with water, but with wind; and it was call'd *Anasarca*, or *Leucophlegmatia* when the Serum, superfluously abounding in the Blood, was not gathered in any cavity of the Body, but lodged in the whole Circumference of it; that is to say, in the Skin, and between the Muscles, so that the outside distended with abundance of Serum, would swell, and press'd with the Fingers would set like soft Wax. It may be deduced from *Sylvius*, that the last kind, which invades the whole circumference is by some distinguish'd in two; from the difference of the Matter contained; the one, which they call *Anasarca*, and we have described already; the other *Leucophlegmatia* is when the same Circumference is not fill'd with a serous Humour; but with a *Pituitous*, that is Lymphatick and Gelly-like Humour: This distinction of the Ancients between an universal and a particular Dropsy seems to be not very exact; because the *Ascites*, *Tympanites*, nay even the *Anasarca*, ought no more to be call'd an universal Dropsy, than a Dropsy of the Head, the Breast, &c. for those Regions, namely, the *Abdomen*, and the circumference of the Body are not the universal Body; therefore a Dropsy ought not properly to be call'd universal; but when an *Anasarca* is joyned with an *Ascites*, a Dropsy of the Breast, and the Head; for then, when it infects all the parts, it may more justly be call'd so; and this is not so rare but has been often observed.

Therefore the difference of Dropsy ought to be desum'd from the places where the water is gathered: from which one is call'd of the Head, or *Hydrocephalos*; another of the Cods, or *Hydrocele*, a third of the circumference, tho' they commonly are complicated and succeed one another; or from the Matter contained; from which one is call'd *Tympanites*, because there are winds mix'd with water, by which the Belly sounds like a Drum. But to run through all these kind of Dropsies would be both tedious and useles, because they have all the same Causes, and consequently require the same Cure; we shall only treat then of the principal ones, which are spoke of in most



most Authors: viz. an *Ascites*, a *Tympanites*, and *Anasarca*. The description of which may be taken from what has been said, and so needs not to be repeated. Note, in the mean time, that the Waters gather'd in the *Abdomen* are sometimes, as it happens most commonly, contained and fluctuating in its cavity; and sometimes, as *Schenkius* and others have observed, it is gathered in some Bladders, that is Membranes of the parts lifted up by the contained *Serum*, and making as it were water Bladders.

The Cause of the Dropsy among the Moderns received, especially of an *Ascites*, and *Tympanites*, are Obstructions in the *Viscera* and first passages; from whence a Collection of serous Matter in the *Abdomen* easily follow; for since the Blood cannot by the *Systole* of the Heart continually absolve its course towards the Heart because of the Obstructions, excited in the Liver, the Meseraick Veins, the Pancreas and Milt; the Blood Vessels hereby very much distended, shed and strain through their open and dilated pores, what is the most thin and waterish in them; or the Blood, which is too Serous, whilst through the substance of the parts it proceeds from the Arteries, into the Veins (for there is no *Inosculation* or *Anastomosis* between the Veins and Arteries, as some have thought) or the Blood I say lays down those serous parts, which easily slip through; whilst that, which is a little thicker in the Blood returns through the Veins; and this is the manner, by which an *Anasarca* rather than an *Ascides* is commonly produced from thick and clodded Blood, from which the *Serum* may easily separate; thus also comes an *Ascites* upon an *Anasarca*, or an *Anasarca* upon an *Ascites*, when in consequence of the Obstructions of the *Viscera*, the Blood being more serous, or at least by its thickness more easily shedding its *Serum*, lays it down in the circumference of the Body; whence in all Dropsies the Constitution is either thicker, that the *Serum* can be easily separated from it; or Spiritless and waterish; and in both cases much destitute of its active Principles; whence it is no wonder, if the *Viscera* be weaken'd suddenly by such Blood; for as the *Viscera* always are of the Constitution that the Blood is of, whatever they have of the Blood; then it follows, that when the mass of Blood is either thick or waterish, the force of the Liver and Milt must be altered, their heat lessen'd, their substance hardened or relaxed.

There

There are some that reckon the Rupture of the *Lymphatick* Vessels to be one of the causes of the Dropsy; but, besides that they cannot so easily be broke, no more than the *Chyle* Vessels; it is certain, that they cannot shed such quantities of *Serum*; as there are found in the *Abdomen* of the Dropsical; for so much *Lympha* even in a great while is not contain'd in the *Lymphatick* Vessels, which are very small; add to this, that the water, found in the Bellies of the Dropsical, never looks like a *Lympha*, that grows thick like a Gelly, but like *Urine*, and has the same colour, smell, and taste; that this water evaporated congeales like *Lympha*, is, because with the *Serum*, that Sweats through, from an Obstruction goes always some of the *Lymphatick* Humour contained in the Blood, and diluted with the *Serum*: as it is used to go through in the Kidneys, and make the Sediment in the *Urine*.

That an Obstruction is the most frequent Cause of a Dropsy is manifest, by a Ligature made in the *Vena Cava*, between the Midriff and the Heart; for then the Blood thrust out of the Heart through the *Aorta*, since it cannot come back to the same place through the Veins, it distends then excessively, from which distension whatever is thin and serous slips and sweats through; so that an hour or two after the making of this Ligature you shall find a pretty deal of extravasated *Serum* in the *Abdomen*. A *Tympanites* differ not from an *Ascites*, so as to have different Causes: Tho' a *Tympanites* has its Name from winds contained in the *Abdomen*, we must not believe, that there is only wind, but likewise water contained in it; from which by Fermentation or Heat Vapours are elevated, that augment the distension of the Belly; a great quantity of wind contained in the Guts, and consequently blowing up the *Abdomen* very much, may excite also, or at least personate this Distemper, as it has been observed by *Platerus* formerly.

Besides the said Causes the *Ascites*, as also a *Tympanites*, and *Anasarca* may be occasion'd likewise by a Stone, or another Cause, that breeds an Obstruction: which makes, that when the Blood cannot disburthen it self of its Vehicle, of which continually it is purged, it grows too thin and waterish by the Vehicles being retained in its mass. Wherefore it must of necessity lay down its *Serum* in one part or other, according to their disposition; the same may be done, when the Kidneys are perforated with little Ulcers, as *Platerus* has observed

served long ago; for then the Urine is not sent away to the Bladder, but through the holes that are made, slips into the Cavity of the Belly. The Cause which *Fernelius* alledges, viz. the disruption of the Membranes, that encompass the *Viscera*, or clefts in the Liver, through which *Serum* is shed; as also that, which others alledge: viz. the Perforation of the Guts, and many more, are imaginations which I shall not stay to confute. From what is said, the Cause of an *Anasarca* may be easily gather'd; for it is nothing but a flat, serous, spiritless Blood; which is apt to stagnate in the spaces between the Parts, and the Circumference of the Body. It only differs from a Cachexy in more or less; so that a Cachexy is a beginning *Anasarca*. Of the three sorts of Dropsies, the external, or precatardick Causes are cold, and moist Viscerals, the suppression of the *Menstrua*, and *Cochia*, or flooding of Child-bed Women; excessive drinking of Water, long and lasting Evacuations, all which are very apt to make the Blood Spiritless, and Waterish.

The *Diagnosis* of the Dropsy is easy enough: For an *Ascites* is known by the standing out, and softness of the *Abdomen*, and the Fluctuation of the Water, which is commonly follow'd by a swelling of the Cods and Feet; the Body grows Lean, and as the Distemper proceeds, they void little Urine, Breath difficultly, with Drought, and at the latter end a slow Fever. In a *Tympanites* the Belly being struck it sounds; the weight of the *Abdomen* is less burthenome; and rolls not so much to the side, to which the Patient turns himself; in an *Anasarca*, or *Leucoplegmatia*, the whole Circumference of the Body, Legs, Arms, Hands, Face, all is swell'd with a serous Humour, that stagnates in these parts; so that where ever the Finger presses a part, it leaves it Mark'd behind; the Skin looks pale, the Flesh feels soft and flabby, the Respiration, especially upon the least Exercise, is difficult.

As to the *Prognosis*: All Dropsies are dangerous and difficult to be Cured; because of the ill Temperament of the Blood, so far receding from its Natural State; and the Weakness, which the *Viscera* in time Contract; to say nothing of the Water, that is extravasated into the *Abdomen*; and is very hard to be got into the Vessels again. The *Anasarca* is the easiest Dropsy to be Cured, because the Water is not contained in any Cavity, but in the Circumference, and the Flesh, whence it may easily go back into the Veins; as *Hippocrates* says in his Aphorism, speaking of the Water between the Skin; if the Water which is in the Veins, flows into the Belly, the Distemper breaks; by the Belly here is not to be understood the Capacity of the *Abdomen*; but the Guts, that is the *Alvus*. A Dropsy coming upon grievous and obstinate Distempers is Mortal; Ulcers.

Ulcers, or Imposthumes coming to a Dropsy are of an ill Omen; but a Looseness is the forerunner of Death; especially at the latter end, for in the beginning it may do good, especially in an *Anasarca*; the *Viscera* being weakened by the Dropsy making it incurable.

The Cure of the Dropsy is performed by several Remedies; the *Ascites*, and *Tympanites*, by Opening, Purging, and Water Purg- ing Apozems; such are those that are made with the Roots of Madder, Parsley, Fennel, Kneeholm, Asparagus, Eringo, Elecam- pane; the middle Bark of Ash-Tree, Tamarisk, Elder, Charvel, the tops of Wormwood, Dogs Claw, with *Senna* and *Agarick*: The Juice of Orris, sweetend with Sugar, is proper; as also Rhubarb in an opening Decoction; the troches of Rhubarb, Wormwood Wine; Salt of Mars, Salt of Ash-Tree, Tamarisks, all fix'd, and volatile Salts are recommended; as also *Spirituos* and *Alcalick* Liquors; the Roots of Fole foot, Orris, Mechoacanna, boy'd in White Wine. They also praise the Powder of Cornachini, and of Toads; the Syrup of Buckthorn.

The Chymists recommend the extract of black Hellebore; also *Mercurius Dulcis*, Diaphoretick Antimony, and in a Decoction of Millet in half Wine half Water; burning, cupping, bleeding, and the *Paracentesis* or the letting out of the Water, are improper; in the mean time Glysters may be given of Emollient Decoctions, with pretty strong Purgatives, to expel the *Serum* downward: Pur- ges must be often repeated, but not be strong; Steel and Mineral Waters are of great Effect; the Bagnio is of use in an *Anasarca*, besides what has been said; Sudorificks, a Decoction of Sarsaparil and An- timony, &c. As to his ordinary Drink: Water, or other Liquors are not to be denied the Patient; as the Ancients did; for thus the Blood would be Fluxed the more; but they must be given in a little quantity, and often; adding something to them, that's acid to quench the Thirst the better: *Riverius* proposes many out- ward Remedies: Cataplasms, Anointings, Fomentations, &c. but in my Opinion they are in this Distemper of no Virtue; unless it be done in the beginning, to soften the hard, and stuff'd up *Vis- cera*: It is to be noted; that whilst the aforesaid Remedies are used, you exhibit also Corroborating Medicines often. There are many more Remedies, proper in the Dropsy; but they are obvious in the Authors; wherefore we leave them out for Brevity sake.

## C H A P. XXIV.

## Of the Hypochondriack Melancholy.

Since this Distemper is not well to be encompass'd with an exact Definition, because of its manifold Nature, personating va-  
rious



rious Distempers, and its manifold Symptoms, hardly sparing any part; I think it will be better first to enumerate the Symptoms that attend it. Those therefore that are troubled with this Distemper, feel often an anguish at Heart, Faintness, acid Belching, an inclination to Vomit, Vomiting, in which sour, rough, and sharp things are voided most commonly: Effervescencies, and as it were Ebullitions in the Belly, rumblings in the Guts, crudities, grumblings, running from one part of the *Abdomen* to the other, gripping, costiveness, shivering, intermitting Fevers, a heat in the *Hypochondria*, a distension in the first Passages; which is sometimes very violent, palpitations of the Heart, Headaches, or a sense of Heaviness in it, swimming in the Head; sounding in the Ears, dimness of the Eyes, spontaneous Weariness, Watchings, interrupted Sleeps, Convulsions, sometimes Sadness, and Fear, copious Spitting, the Urine is sometimes Waterish, sometimes very red with red Sand, sometimes Clear, and sometimes Thick; lastly, they have a difficult Respiration; and which happens often, a sense of being Choak'd, or Strangled; the same as it is in the Hysterick Women. Tho' we must observe, that all these Symptoms are not seen in all Hypochondriacks; but that they are more or less in Number and Violence, according to the Nature, and constitution of the Blood, and its different Depravation, as also the more or less perverse Constitution of the Spirits.

This Distemper is called Melancholy; because it always Invades those that are of a Melancholy Temperament, and that it is attended with Sorrow, and Fear; it is distinguish'd from that Distemper, which simply is called Melancholy, and belongs to the Brain; by those manifold Symptoms above mention'd; for in that, which is simply called Melancholy, is only a Delirium with sorrow and sadness, without any Fever attending it: But these two Distempers are for the greatest part Complicated, and when the said Symptoms in the Breast of the *Abdomen* shew themselves, then the Melancholy Delirium is always most observable.

And this Distemper is not only called Melancholy; but Hypochondriack is also added to it, because that the Symptoms, which chiefly are used to attend it, appear in the *Viscera*; and especially the *Hypochondria*: It is really difficult to Name the true seat of this Distemper: Some will have it to be in the Milt, because they believe, that part to be the Receptacle of the Melancholy Humour; which if it be burnt up in it, (as they call it) grows hot and dry, degenerates to black Gall, is mix'd with other Humours, and able to produce the aforesaid Symptoms.

Others

Others lodge it in the Stomach; as *Galen* after *Diocles*, and among the Moderns *Franciscus De le boe*, *Sylvius*; who thinks that the seat of this Distemper is the Stomach, or the adjacent Parts; as say the *Duodenum*, where the Triumvirate of Humours is found, viz. the Spittle, Gall, and *Succus Pancreaticus*: From whose preternatural Effervescency, and Mixture he deduces this, as well as many other Distempers: The reason why some of the Ancients, and *Sylvius* himself imputes the Hypochondriack Melancholy to the Stomach, is because the Symptoms of a disorder'd Stomach are always seen in the beginning of this Distemper; as Crudities, Belchings, Vomiting, Sickness, &c: as also, because the Symptoms attending this Distemper are always Exasperated after the taking of Food; some not without Reason, rank this Hypochondriack Melancholy among the Convulsive Distempers; that belong to the Nerves, and think, that as well as the Hysterick Passion, this Distemper is of the Epileptick sort; which therefore they have been pleased to call a Suffocation. So that, according to this Hypothesis, the seat and spring of this Distemper is in the Nerves, of the *Par Ovarum* and *Intercostale*; which serve the *Precordia* and *Abdomen*, where most all the Symptoms appear.

But we, joining the aforesaid *Hypothesis*, say that its seat is radically in the Spirits, and the first Passages; else such a Distemper could not bring all the above mention'd Symptoms. The Blood is in fault, and made fit to produce this Distemper by an acid Salt, that is Predominant, and as it were brought to a Flux; which how true it is, is testified by the Melancholy Temperament, so common in this Distemper; the same is testified by the Grief, and Sadness proceeding from Blood that is thick, and overcharged with Acids; it is testified also by the Copious Spitting, which is so Familiar to Melancholy People; because of the Coagulation of the Blood from the Acid, and the easy Separation of the *Serum*: It is testified likewise by the keen Appetite, the acid Crudities, or acid Belchings, all which shew, that the acid is prevalent in the Body. The Pancreatick Juice, falling down from the acid Blood is in fault, and so is even to the Ferment of the Stomach; and therefore the Food is not well digested, and turn'd to Vapours, and bad Humours; hence come the breaking of Winds backward, the rumblings and croakings in the Belly, Ebullitions and Effervescencies, whenever these two acid Juices in the *Duodenum* meet with the Alkaline Gall, or the *Viſcals* themselves, which are most Alkalies; the Excessive Acidity in the Blood is apt also, by the sliding away of the *Serum* impregnated with the Acid, and its Extravasation in the Skin, to excite shiverings and griping in the Guts; not

not only by raising Winds, that distend the Membranes of the Guts; but also by corroding the Tunicks of them with their little sharp Points: But because the Blood by the predominant and defrauded of its Spirit, and Sulphur is made thick and drossy; therefore it grows fit to stuff and obstruct the *Viscera*, when by its thickness it cannot go through the Capillary Vessels, that are dispersed through their Substance; and hence comes the Distension, and Hardness, hence comes the Costiveness, when the Gall is separated, and flows through its Ducts in less quantity: The great Heats which they feel, are only to be derived from the Ebullitions and Fermentations, which we said happen'd, when the acid Humours met with the Gall; but the great Heat of the Aliment must be imputed to the vast heap of Humours, with which the Melancholy People abound; for Bodies of a great bulk make greater Impressions, when they are moved, than those of lesser bulk; this is manifest by the Heat of Brandy that is set on Fire, and that of a Coal, or red hot Iron.

The Fevers also, that, as it were return by fits, which are observed in an Hypochondriack Melancholy, may proceed from those Heats, that are communicated to the Circulating Blood; or from the Advent of the Chyle into the Blood, which is overcharged with Acids, with which it cannot easily be mix'd, and consequently excites an Ebullition, and Fermentation for some time. But that in this Distemper the Spirits are no less in fault, than the Blood, may be easily gathered from the following Symptoms, *viz.* Vomiting, Anguish of Heart, difficulty of Breathing, Palpitation of the Heart, Vertigo, Delirium, Convulsions, and especially a Sense of Suffocation: The immoderate Cause of all which Symptoms, is the preternatural Motion of the Spirits, and their violent working in the Heart, Muscles of the Breast, Stomach, *Oesophagus*, the Muscles of the *Larynx*, the Brain, &c. Which violent working, how much it may be help'd by an acid predominant in the Body, appears in an Epilepsy; in which the Members suffer great Contractions; and these disorderly Motions of the Spirits shew themselves most in the *Abdomen*, or the Breast, because the *Abdomen* is, as it were, the Sink and Common-shore of the Body; where the Humours are more impure; and these are apt to move the Spirits, in the *Plexus* of the *Mesentery*, which disorder is afterwards easily communicated to the *Oesophagus*, and Throat by the Correspondence of the Nerves, and Membranes, nay even to the Brain, if it be stronger to raise a Delirium and a Vertigo; which Symptoms yet may be Primary, and caused without feeling, when the Heterogeneous Particles, supplicated from the Blood, meet with the Spirits in the Brain.

The External and Procatartick Causes of this Distemper are such, as are able to depress the Spirits, and Sulphureous Parts of the Blood, and to Exalt an Acid. As Gross, Crude Viscerals, Sadness, Grief, Idleness, a sedentary Life, Cares, Troubles, Immoderate Study, Suppressions of the *Menstrua*, and the Piles; all which are either by dissipating the thinner Parts, Thickning the Blood, or Furnishing Acid Particles, to pervert the Mass of Blood, and make it Acid.

The *Diagnosis* of the Hypochondriack Melancholy is to be fetch'd from the Symptoms above related.

As to the *Prognosis*: This Distemper for the most Part is not Mortal; yet is very long, and lasts most Commonly one's Life-time: It is very Obstinate, and Difficult to be Cured; which argues, that the Acid is Predominant, which makes the Humours Gross, Stubborn, and not easily yielding to Purging, and altering Medicines: And this is the Reason, why it is usually call'd the Rod, and Reproach of the Physicians, and continually requires a Change of Remedies: According as the Symptoms are many, and grievous, so you must Judge of the Danger; and if a Delirium, Vertigo, and Difficult Breathing rage much, it is to be fear'd, that it may turn to an Epilepsy.

The Cure of the Hypochondriack Melancholy requires more altering, than purging Medicines; and more particular, than those, that are call'd universal Remedies: For Bleeding in this Distemper, at least in Respect to the Cause is improper, and when it is used, it is done by Reason of a *Plethora*, a Fever, Heats, Convulsions, and other Symptoms, that come upon it; tho' Purges must be given; yet it must be done seldom, and not, unless after altering Medicines; for it is Evident by Experience, that an Acid yields not to Purging. Glysters are reckon'd among the universal Remedies; they are frequently to be used, and must be Emollient, and Strong enough, with *Hiera Picra*, the Blessed Laxative, *Diaphenicon*, nay sometimes with an Emetick. The Cure is to be commenced with Aperient, and Purging Apozems, given for 3 or 4 days in the same Form, and of the same Medicines, as are prescribed in the Cure of the Dropsy; adding to each Dose a little Salt of Tartar. After the Apozems, Mutton Broth with Attenuating Herbs: As *Fumitory*, both the *Cresses*, *Chervil*, the Tops of *Wormwood*, *Mint*, &c.



Flowers of Broom, Elder, Tamarisk : Whilst the Broth is a using you may purge with Pills, or a Bolus of Cassia may also be often given ; for Cassia is very good, and commonly Purges more in this Distemper. Milk is no ways convenient here ; but well its whey, which Fumitory and Dodder have been Steept in, to be taken for some Days. Juleps with Spirituous Liquors ; as are Cinnamon Water, *Aqua Vita Matthioli*, Treacle Water, given in small Doses, are recommended : All Chalybeat, and Mercurial Medicines, Volatile and fix'd Salts are also of very great use, either in Broth, or an Opiata : Saffron, Cinnamon, and all Aromaticks may likewise be given : also Hellebore, and Wormwood Wine, Confession of Alkermes, of Hyacinth, Venice Treacle ; in a word all, what by Warming and Opening Exalts the Spirituous and Sulphureous Part of the Blood, or Corrects and Consumes the Acid ; Lastly Mineral Waters, and Bathing must perfect the Cure ; not to be Tedious, I Pass by many other Remedies to be found in the Authors.

## NOTE.

‘ The Cure of the Hypochondriack ought most commonly to begin with Bleeding, and after the use of the preparing Remedies, mention’d by our Author, and a gentle Purge ; as the Infusion of Senna with Cassia, and Syrup of Roses ; it is proper to apply Leeches to the Hæmorrhoid Veins : For tho’ this draws the Blood not immediatly from the Spleen, or the Vena Porta, through the Meseraick Vessels, as the Ancients thought, that were Ignorant of the Circulation of the Blood ; yet it is constant from Experience, that in those Cases it is usefull to draw Blood from the Hæmorrhoid Veins in Imitation of Nature, whose Spontaneous Hæmorrhagies this way allways relieve the Patients.

‘ Some think, that the Cure is chiefly to be perform’d by Vomiting, and begin with that ; it is true, that by this the Acid and viscous Humours, that Strick to the Tunicks of the Stomach ; in which it is thought the First cause of the Distemper is lodg’d, are voided ; but the Patients, which in this Distemper are allways peevish, and fearfull, often refuse to take this Course.

‘ As to the use of Steel : Some mixt them with, or give them between Purges ; others of which Dr. Sydenham is one, think, that the Efficacy of the Steel is destroyed by them. You may begin with Chalybeat Purges, and end with mere Chalybeats only ; among these the most Simple Preparations are the best ; nay even the Rusty Filings of Steel Powder’d are sometimes to be preferred to all the Laborious Preparations of the Chymists.

‘ For

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For with them the Acid Juices are more easily *saturated* and *sweetned*: The Pills of the Filings of Steel with Jesuits Bark, and Syrup of Apples are also also proper. The *Spices* mention'd by our Author are to be used sparingly and seldom; for they only relieve the Patient for a time, and and there is not to be expected so much Benefit from their Use; as the Abuse of them may do harm; Wine is likewise not very safe, and ought only to be Prescribed in a small quantity, and temper'd with Water. I have known some that have found themselves very well by Drinking nothing, but Water, for their ordinary Drink. The use of Milk, and especially Asses Milk, is not to be rejected, the Body being First Prepared:

## C H A P. XXV.

### *Of the Stone in the Kidneys.*

THAT we have *Stone Mines* within us not to build up, or repair the Fabrick of Human Body; but rather to destroy the same, is manifest by the fatal Experience of those, that are troubled with the *Stone*; but they are not only bred in one place, the Bladder, and *Kidneys*, where by Excellency they are call'd the *Stone*, but they hardly spare any Part; for *Stones* have been bred in the Tongue, the Lungs, the Liver, the Milt, the Mesentery, the Womb, the Stomach, the Gall Bladder; nay even in the Brain itself; as we know from the Innumerable Observations of Practitioners.

Omitting then the various Generations of *Stones* in the various Parts of the Body, we shall only Treat here of the *Stone* in the *Kidneys*, which belongs properly to this place, and cruelly as well, as dangerously Afflicts Human Bodies.

The *Stone* in the *Kidneys* is, to begin from the Definition, a hard, solid, and, for the most Part, rough Body congealed from a Terrestrial, Glewish, and Salt Matter, brought forth in the Substance of the *Kidneys*, producing an Obstruction, Distension, and Dilaceration; whence various Symptoms, and those very severe ones, use to follow, which we shall relate in their place.

The Ancients and Moderns differ about the Material, as well, as the Efficient Cause of the *Stone*: The First alledge a Thick Phlegm, which by the heat of the *Kidneys* degenerates to a chalky, and afterwards to a stony Nature; or a Lapidescient Juice, that is turn'd into *Stone* by some

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*Lapidifick Spirit, and a Calculous Disposition of the Kidneys.*

But others ; the vain Names of *Lapidescent*, and *Lapidifick*, as not at all illustrating, what is difficult enough besides, rejecting ; and thinking, that all the Observations of *Riverius* of the *Stone*, and the Heat, and Phlegm were not capable Causes to produce a *Stone*, have more probably, and more evidently establish'd an other Material; as well as Efficient Cause of the *Stone*; which they deduced from Experience in Chymistry ; whereby it appears, that Spirit of Wine makes a great Fermentation with the Spirit of Urine, and that afterwards by Precipitation they Coagulate to something, that is Stony : They imagined the like Liquors were in the Blood ; which meeting one another in the Urinous Ducts of the *Kidneys*, or their *Pelvis*, made in the like manner a *Stone* by Precipitation ; But tho' this manner of Explaining the Production of the *Stone* is more Physician like, yet it is not less Erroneous ; for tho' we should allow, that there are such Humours like Spirits of Wine, and Urine in the Blood, yet they would not be so pure, as to raise such an Effervescency in the *Kidneys*. I am of Opinion that they have hit it, that for the Generation of a *Stone* in the *Kidneys* alledge nothing else, but the Terrestrial, and Tartarous Parts of the Blood, that Joyned with the Clamminess of the Viscous Lympha, that continually Flows by with the Urine, and further compacted together by the Salts, with which the Urine is loaden, put on the Nature and Figure of a *Stone* ; the Structure of the *Kidneys*, as well, as the Flaggedness, and Dilatation of the Glandules of the *Kidneys*, and Ducts of the Urine, concurring to this work.

The External Causes of the *Stone* are Terrestrial Viscuals ; as Wine, that is too Tartarous, Salted and Smoak-dried Meats, Cheese, Rie Bread, Unclear Water, a Thick, and Foggy Air ; in a word all things, that are apt to give the Blood a Tartarous Nature : The External Causes may be gathered, from what has been said ; and the *Diagnosis* of this Distemper may be learn'd from the Concourse of various Symptoms ; the First, and chief of which is a fix'd Pain in the Back, the *Stone* with its bulk distending the Urinal Ducts, and tearing them by its Roughness. The Second is thin, and pellucid Urine ; especially when the Nephritick Fit is at hand, which proceeds from the Stoppage of the *Kidneys* with the Sandy Matter,



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Matter, that makes the *Stone*; or with the *Stone* it self, which makes that only the Serous, and thin Part of the Urine can get through; the grosser Parts, which, because of their Bulk, cannot penetrate the little Ducts of the *Kidneys*, Remaining in the Strainers. Sometimes the Urine is Bloody; especially after stirring and immoderate Exercise; which is to be imputed to the Roughness of the *Stone*, tearing the Blood Vessels that are up and down. A Third Sign of the *Stone* is a Numness of the Leg of the afflicted Side, which, tho' it is adscribed to the Muscle. *Psoas* being press'd, as being near the *Kidneys*; yet is better laid upon the Nerves, that from the Loyns are dispersed through the Leg, and press'd by the *Stone*. Fourthly an Inclination to Vomit, and Vomiting with which the Patients are so Troubled, that they can hardly keep their Viſuals: The Reason of which Symptom is desumed from the *Consensus* of the *Plexus Renalis*, with that of the Stomach; by which the Spirits, that serve the *Kidneys* communicate their Disorder, and Motion which they suffer from the *Stone*, that Pricks, Gnaws, and Tears the Nervous Fibres of the *Kidneys*; to the Spirits, that Lodge in the Stomach; whence the Stomach is pull'd, and throws out whatever it contains. Fifthly a Sign of the *Stone* in the *Kidneys* is, the Retraction of the Testicle, that is of the same Side with the Affected *Kidney*; the Cause of which Retraction is to be imputed to the *Kidneys* being Distended by a *Stone*, or a Calculous Matter, and consequently the Ureter's being shorten'd: or to the Dilatation of the Ureter, if the *Stone* is got into the beginning of it; for, since the Vessel, that carries down the Seed, to which the Testicle hangs, or of whom it is rather a Continuation, whilst it is inserted in the hind part of the Neck of the Bladder, climbs over the Ureter, that is fix'd in the same Side of the Bladder, the Ureter cannot be retracted, or shorten'd, but at the same time the Vessel, that carries the Seed down, or the *Vas Deferens*, must for the same Reason like a Handle draw up the Testicle. The last, and which is the surest Sign of the *Stone*, is the voiding of a small *Stone*, which shews the Mine from whence itself is drawn: to all which Signs you may add, instead of an adjuvant Cause, an Hereditary Disposition to the *Stone*.

The Prognosis in this Distemper cannot but be Bad, for the *Stone* in the *Kidneys* is never without Danger; because



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Very grievous and pressing Symptoms always attend it; as Inflammations, Ulcers, very Violent Pains, Watchings that last long, the Loss of Strength, most Commonly a Fever, and sometimes a total Suppression of the Urine; which a Prudent Physician ought allways to Pronounce Mortal.

As to the Cure; when the Patient has Bled as much, and as often, as a Prudent Physician shall think fit; Glysters must be often injected with Laudanum, to assuage the Pain; sometimes Emollient, and Lenitive, nay even Narcotick, and sometimes with Diaphenicon, Turpentine, and Oyl of Scorpions, which do good in the Stone; Purging likewise often, and when the Pain remits; either in Form of a *Bolus* of Cassia, Turpentine, Diaphenicon, or Diacarthamum with Sugar or Powder of Liquorice; or in the Form of a Potion, the Decoction of Marsh-mallows, the Tops of Mallows, Pellitory of the Wall, Rupture-Wort, Saxifrage, with Senna, Cassia, and Jalap, &c, or give a gentle Vomit, when the Load of Humours skulks in the first Passages. Prescribe also things, that loosen the Passages; as Bathings often repeated, Emollient Fomentations, Decoctions of the Roots of Marsh-Mallows, Mallows, Violets, Pellitory of the Wall, Succory, with Syrup of Marshmallows of *Fernelius*, Butter, Oyl of Lillies, Scorpions, of Sweet Almonds to three Ounces; or also of bitter Almonds in Broth, or any other more proper Liquor; which must be followed by *Lithontriptick* or Stone-Dissolving Remedies. Such are a Decoction of Straw-berry Leaves, Saxifrage; the Roots of Smallage, Fennel, Kneeholm, Petty-Whin, Eringo, the Juice of Pellitory, and Saxifrage; Goats Blood prepared; the Ashes of Scorpions, Powder of Wood Lice in White Wine, as also Wine where the Berrys of *Alkekengi* bruised have been Steeped in: The Juice of Ragwort in White Wine.

The Water Distilled from Savin, Saxifrage, or Bean Shells: Or a Decoction of the Roots of Golden Rod, or Thistles; Grass; the use of Turpentine; and especially its Spirit is very beneficial in breaking the Stone. The Chymists recommend the Salt of Bean-shells, and Stalks taken to half a Dram in White Wine; Mercurius Dulcis; Spirit of Salt, and Nitre: Others recommend the Natural or Oriental Balsam; instead of which you may take some Drops of Balsam of *Peru*, Oyl of Sweet Almonds, in Broth, or the Distilled Water of Green Tabacco. Some recommend

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recommend Filbert Nuts, or the Oyl squeez'd out of them; others the Drinking of lukewarm, Water to be continued for some Days; and many other things, which for Brevity's sake I Omit, and may be seen every where in the Authors. The Hot and Cold Mineral Waters are also proper, as well for a Preservative against, as a Cure for this Distemper: in the mean time it is to be observed that Whilst the Pain and Watchings rage Narcoticks are to be prescribed; as *Laudanum*, Syrup of White Poppies, of Water Lillys, &c. as also Cakes of Boyl'd and Bruised Pellitory moystned with Oyl of Scorpions, and applied to the Loyns, an Emollient Fomentation, or a Cataplasim of Crum of Bread are said to ease the Pain wonderfully.

#### N O T E.

• Besides the Specifick Simples in the *Stone* of the *Bladder* mention'd by our Author; the Seeds of *Daucus*, the Roots of *Bur*, and, besides the other Radishes, *Horse Radish*, *Ground Ivy*, *Burnet*, *Saxifrage*; the Flowers of *Golden Rod* Powder'd, and to a whole Dram given in Wine, or some Broth by the Experiment of the *Elegant Barclay*; as also the Flowers of *Blew Bottle*, the Seeds of *Nettles*, *Burr*, *St. John's Wort*; Gum of *Cherry Trees* dissolved in Wine; Ashes of *Scorpions*, and *Cantharides* to some Grains, the inner Skins of the *Gizzards* of *Chickens* dried, and power'd to a Dram in Wine, or Broth, are recommended; as also the distill'd Water of *Green Nuts*, and their Catkins three or four times cohobated; the *Judaick Stone* a dram of it being given in *Lemon Juice*, the *Lynx Stone*, and five Hundred more. All these things are very fine; but not to deceive Young Beginners, we must observe, always to begin with Lenitive, and Evacuating Remedies, nay never to leave them, to abstain from Wine, to Bleed often, sometimes in the Arm, sometimes in the Ankle; and to persist in the use of Baths and Nitrous Medicated Waters. Let your Purges be sometimes Strong, as a dram of the blessed Species in Broth, sometimes gentle as *Cassia*, *Whey*, and the like. See the Chapters of the *Ischury* and *Straugury*.

### C H A P. XXVI.

#### *Of the Stone in the Bladder.*

FROM what has been said of the *Stone* in the *Kidneys* may sufficiently be gathered what the *Stone* in the *Bladder* is; how, and of what it is made; as also by which Remedies it is cured: For the Nature, and Con-

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dition of both are the same ; and these two Distempers differ no otherwise, than that they trouble diverse Parts ; the one the *Kidneys*, and the other the *Bladder*, wherefore they require a different *Diagnosis* ; but, before we propose the Signs of the *Stone*, we must mention first ; what has been observed by *Riverius*, and other Authors ; that commonly Boys are more troubled with the *Stone* in the *Bladder*, and that Men, and those of riper Age are more troubled with the *Stone* in the *Kidneys* ; I say commonly ; for Boys are often afflicted with the *Stone* in the *Kidneys*, and Men with that in the *Bladder*. The reason, that can be given of this *Phænomenon*, is that Children Piss not so often ; partly because the Urine is not so Sharp ; partly because Indulging Sleeping, and taken up with their Play, they often Remember not to make Water ; wherefore the Urine being longer detained in the *Bladder*, the thicker Sinks to the bottom and grows Hard in time : Add to this, that in the Children the Urine is more thick, and viscous ; and the Viſtuals, because of their Greediness, are not so well Concocted in the Stomach, Guts, and other Parts ; all which may be helped by an Hereditary Disposition.

But because in Old people, and those of a more settled Age is not found, what we have said of Children, there is a greater Disposition to the *Stone* in the *Kidneys*, than than that of the *Bladder* ; because by the Heat, which is increased by Age, the Passages of the *Kidneys* are more dilated, and open ; and consequently let not only pass the Urine, or the thin *Seruum* ; but likewise the Thicker Parts, at least they suffer them to enter into the Strainers ; where afterwards they are detained, and hardened ; which yet can not happen, unless there be an Hereditary Disposition, or an earthly, or Lymphatick Constitution of the Blood.

As to the Generation of the *Stone* in the *Bladder* some think, as *Fernelius* does, that no *Stone* is Originally made in the *Bladder*, but that all have got their Rudiments in the *Kidneys*, from whence expelled, and sent to the *Bladder* they grow up ; to prove which Sentence he asserts ; that in the broken *Stones* of the *Bladder*, he has found, as it were a Kernel in the Middle, which the rest like a Shell encompassed ; Secondly he adds, that all, that are troubled with the *Stone* in the *Bladder*, have had Nephritick Pains first.

This Opinion is not so false, as to be altogether rejected : For in the greatest part the *Stones* have their Ori-



Ein in the *Kidneys*, from whence, coming when they are Small, and descending to the *Bladder*, they grow, and are augmented by that Tartarous and Glewish Matter, which is found in the Urine of those, that are Troubled with the *Stone* in the *Bladder*. Yet this hinders not, but that sometimes they are brought forth Originally in the *Bladder*; which is not harder to be conceived, than that the same is Augmented there; for the Matter, which to augment the *Stone* grows hard, may as well grow hard by it self, and so turn to *Stone*. The Truth of this is manifest by several Observations of Practitioners, that have seen Children, afflicted with the *Stone* in the *Bladder*, that never had been troubled with Nephritick Pains.

The *Diagnosis* of the *Stone* in the *Bladder* differs according to the times; in the beginning, whilst the *Stone* is but little, it is Difficult; afterwards as it increases the Signs grow more certain. First there is a Pain in the Neck of the *Bladder*, which is Exasperated at the latter end of making Water, an Itching of the Yard, and a Sense of Heaviness in the *Regio Pubis*, a Difficulty of making Water, the Urine comes away by Drops, and is sometimes quite Stop'd up, with a frequent Desire of making Water; but the Difficulty of Pissing is taken off, for the most part, by lying Backward, and with the Head downward: There is also a frequent erection of the Yard; because of the afflux of Spirits into the Yard from the Irritation: A *Tenesmus* or a frustraneous Desire of going to Stool, caused by the *Consensus* of the Fundament with the Neck of the *Bladder*, irritated by the *Stone*; Restlessness; Shaking of the Legs from the Pain; especially when the *Stone* is Large, and Rough; for then the Patients can hardly Run, Walk, or Ride; nay upon the least Tottering of the Body they Fall, because they stand not firmly on their Feet. They feel a Pain in the *Perineæum*, which is not mitigated by any Remedies; Nephritick Pains are gone before, which ceased when the *Stone* was come down; some little *Stone* has been voided; there is a Sandy Settlement in the Urine, and a Slimy Glewish Matter is voided with it, that sticks hard to the Pot: And this is not; what is left of the third Concoction of the *Bladder*; which Slimy Matter may not be voided, where there is a *Stone*; but is seldom voided where there is none. The last, and most certain Sign of all is Searching which



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is done with a Catheter, or Thrusting the Finger up the Fundament; the Catheter is also used by the Surgeons to repell the *Stone*, if it be not fastened to the *Bladder*, to let out the Urine.

The *Prognosis* of a *Stone* in the *Bladder* must always be bad; especially if the *Stone* be large; for then it is not to be got out, but by Cutting: When it is fasten'd to the *Bladder*, and when it is Rough, and has grievous Symptoms it is more Difficult to be taken out.

As to the Cure, the same Remedies, which we prescribed in the *Stone* of the *Kidneys* take place here likewise; but because they are commonly of no use; especially when the *Stone* is Large, therefore the Patient being blooded by Precaution, and the thick Guts being wash'd by a Purging Glyster, that the Excrements may not hinder the Operation; after Walking some time up and down Stairs, to bring the *Stone* toward the Neck of the *Bladder*, tie his Hands to his Feet, then let the Patient lie Backward, and his Legs and Knees brought forward to the Head and tied to his Arms, the Operation be performed; either with the great or lesser Preparation: that is with the Catheter through the Yard in the *Bladder*, or two Fingers thrust up the Fundament.

### N O T E.

\* About the cure of the *Stone* in the *Bladder* without Cutting,  
\* see *Sennertus*,

## C H A P. XXVII.

### *Of an Inflammation and Ulcer of the Kidneys and Bladder.*

**T**HE Inflammation of these Parts differs not from that of the Liver, or Stomach, nor has any other Causes, either Internal, or External; unless perhaps Cantharides have been taken or outwardly applied; especially in Blister Plaisters near the Region of the *Bladder*, that these cause an Inflammation of the *Bladder*, and the manner how, we have explained in the Chapter of the Bloody Flux. The Definition then and the Causes of this Distemper may be fetched from the Chapter of the Inflammation of the Liver, and Stomach; where the Cure, which in this Case must be the same with all the Inflammations

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mations of the Abdomen, may be learned likewise : So that Treating of this Distemper, there remains nothing, but to speak of the Signs to discover an Inflammation of the *Kidneys* and *Bladder*.

First then in an Inflammation of the *Kidneys* there is, either in the Left, or Right Side of the Back ; according to the *Kidney*, that is affected, a Pain from a Distension, proceeding from the Blood, that makes the Swelling ; this Pain is greater, when the Inflammation is in the Surface, than when it is in the Substance of the *Kidneys* ; for then the Pain, and the Inflammation it self is communicated to the Adjacent Parts toward the Back bone ; there is also a Numness in the Leg of the affected Side ; because the Nerve, which serves the Leg, coming from the Bone in the Region of the Loyns, is press'd by the Inflammatory Tumour, and receives not its due Quantity of Spirits ; the Patients are sometimes troubled with a Dysury ; because the Urine is made Hot by the Inflammation, that as communicated to it. In the beginning the Urine is Thin, and Clear ; because the *Kidneys* being stop't by the Extravasated Blood, and pressed and Straiten'd as well is their Urinous Ducts, allow only a Passage, to that, which is Thin and Serous. Afterwards the Urine grows, Thicker, and Redder, because the Inflammation, and Swelling abate, and consequently press not so Hard.

A continual, and acute Fever afflicts the Patient ; which is Essential, if it comes before the Inflammation, when there are *Heterogeneous* Parts skulking in the Blood, that trouble and Agitate it ; this Commotion Causes the Blood to settle in the *Kidneys* and thence comes the Inflammation. But the Fever is Symptomack when it follows upon the Inflammation ; that is, when it is not felt, before the Blood is Extravasated in the Substance of the *Kidneys* ; which, whilst it putrifies, and by its Stay corrupts, Furnishes the circulating Blood with some *Effluvia*, which are apt to raise a Ferment in it : There are likewise a Sickness, and Vomiting, caused by the Disorder of the Spirits of the Pain, communicated by the Nerves of the *Kidneys*, to those of the Stomach ; sometimes Watchings, *Delyrium's*, &c. which may be easily explained : If the Gut *Colon* be inflamed, where it is nearest the *Kidney* of either Side, it is hard to be distinguish'd from an Inflammation of the *Kidneys* ; yet in the latter the In-

flammation

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inflammation spreads more toward the Back and *Bladder*; but that of the *Colon* more toward the Belly, and makes a greater Difficulty of going to Stool, and a greater Alteration in the Excrements.

But the Signs, that argue an Inflammation of the *Bladder*, are a Pain in the *Regio Pubis*, and the *Perinaum*; for there is the Tumour, that makes the Distension; as also a Heat, and Redness in the same Part, a continual Heat of Urine; because it grows Hot from the Inflammation, that is in the *Bladder*; sometimes the Urine is suppressed, either by Reason of the Tumor Stopping the Orifice of the *Bladder*, or the great Distension of the same; for which it can not contract it self; as it happens, when the *Bladder* is too full; besides the Strait Gut is afflicted by Reason of the Neighbour-hood and Communion of the Nerves; whence there is a frequent desire of going to Stool, sometimes also the Body is Costive; by Reason of the Inflammation, communicated to the Strait Gut, or the Swelling of the *Bladder* pressing the Strait Gut: There are also the other Symptoms, that are seen in other Inflammations; Watchings, *Delirium's*, a Fever, Drought, &c.

The *Prognosis* of an Inflammation of the *Kidneys*, or *Bladder* must always be Bad; for all Internal Inflammations are full of Danger, especially in those Parts, that serve in principal Offices, on which Life depends. Yet these Distempers are called less Dangerous, if less grievous Symptoms attend them; as if the Strength is intire, the Inflammation but Slight, and Small.

These Distempers as we hinted before are cured by no other means, than the other Inflammations, of which we have treated above: The Remedies may be seen, where we treat of those Distempers; the use of Cooling Glysters does great good here; Cooling Fomentations of Oxycrat are likewise proper; but all other outward Applications are of no use.

## C H A P. XXVIII.

### *Of an Impostume and Ulcer of the Kidneys and Bladder.*

**A**N *Impostume*, and *Ulcer* may follow upon an Inflammation of the *Kidneys*, and *Bladder*; for an *Impostume* is made, when the Blood, which Causes the Inflammation

mation is not discusſed, or drawn back into the Veſſels, but ſtagnating is ſuppurated by a further Fermentation; which ſhall be known firſt by the Exaſperation of the Symptoms; for, whiſt the Matter is a making, they all increaſe; and afterwards, by the remitting of the Pain and the other Symptoms: This Diſtemper muſt be treated in the ſame Manner, as an *Impoſtume* of the Liver or Stomach; when the *Impoſtume* breaks, and the Matter flows from it, it becomes an *Ulcer*; the *Impoſtume* in the *Kidneys* or the *Bladder*, either breaks outwardly toward the *Abdomen*, and then after an Heſtick Fever you muſt expect Death; unleſs the *Impoſtume* be Small; or, being in the *Kidney*, it ſhews it ſelf in the Back, and then with a Knife, or a Cauſtick it is to be open'd, and; after the matter is diſcharged, to be cured like other *Ulcers*: Or Laſtly the *Impoſtume* breaks in the Inſide of the *Kidneys*, as well as the *Bladder*; and then the Matter comes away together with the Urine. Whether this *Ulcer* belongs to the *Kidneys*, or the *Bladder* may be known; not only by the Inflammation, that's gone before it; and Invades the *Kidneys* for one, and the *Bladder* for another Reason; but alſo by the Situation of the Pain, and likewise its Sharpneſs; for it is Sharper in the *Bladder*, as being Membranous; than in the *Kidneys*, which are fleſhy; there is alſo a continual Heat of Urine, when the *Ulcer* is in the *Bladder*; but not when it is in the *Kidneys*; an *Ulcer* of the *Kidneys*, and *Bladder* has, beſides what has been alledged, on other Cauſe, viz. an Acrimony of Humours, or Urine Corroding thoſe Parts; or, which often happens, a rough and uneven Stone, eſpecially, when the Patient ſtirs much, that tears the inner Tunick of the *Bladder*: when the bloody Urine goes before, and mattery follows; when the Stone of the *Kidneys*, or *Bladder* cauſes the *Ulcer*, you may know it by the Signs given, when we treated of the Stone; and the Acrimony of the Humours muſt be accuſed, when the other Cauſes are abſent.

As to the *Prognosis*: Thoſe *Ulcers* are always of an ill Omen; as indeed we have ſaid of all Internal *Ulcers*, that are commonly attended by a ſlow Fever, and Emaciation. A freſh *Ulcer* may more eaſily be cured than an Inveterate one; that, which is cauſed by a Stone, can not be cured, unleſs the Stone comes away.



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The Cure of an *Ulcer*, as well of the *Kidneys*, as of the *Bladder*, besides the Universal Remedies, as Bleeding, if it be necessary, and Purges and Glysters often repeated, requires some other particular Remedies: As Milk, Emulsions, when there is no Stone, a Decoction of Vulnerary Herbs; Diaphoretick Antimony; some Drops of Balsam of *Peru*, of Sulphur made with Oyl of Turpentine; the use of Turpentine with Cassia, and Powder of Liquorice in the Form of a *Bolus*: Mead given for some Days, or Sugar and Water: Prescribing also sometimes a Decoction of the Root of Marsh-Mallows, Lillies, the Tops of Mallows, the Mucilage of the Seeds of Flea-wort, and Quince. The Bath, a Sudorifick Decoction, and mineral Waters are proper likewise.

To cleanse and heal an *Ulcer* of the *Kidneys* or *Bladder*, the Authors recommend the Troches of *Gordon*, that mitigate the Pain, and lay the Heat of Urine; give two Drams of them with Mead; or a Decoction of Barley, Rayfins, or Liquorice; or in Milk. In an *Ulcer* of the *Bladder* are particularly convenient detergent and closing Injections; such are in the beginning, a Decoction of Barley, and Liquorice, adding to it Honey, and Sugar; afterward prescribe a Vulnerary Decoction of Gentian, Birthwort, *St. Johns Wort*, Centory, in Water or Red Wine: Or inject sometimes, to ease the Pain, Milk or an appeasing Decoction; in which the Troches of *Gordon* may be dissolved; in Milk especially, which makes an excellent Injection to consolidate. Sometimes the Pain is to be mitigated by Remedies taken at the Mouth; as the Narcotick Syrup, Laudanum, Troches of Alkekengi. That the aforesaid Injections may be carried into the *Bladder*, First put in your Catheter, and then Adapt your Syringe to the Catheter. And *Ulcer* proceeding from the Stone requires the Cure, that is given of the Stone.

### N O T E.

‘ In an *Ulcer* of the *Kidneys*, or *Bladder* Asses Milk excels  
‘ all other Remedies; or for want of it Cows Milk, mixed  
‘ with Barley Water, or a Decoction of the Nephritick Wood,  
‘ China, Salsaparil, Lentiscinum. Besides the Vulnerary Herbs  
‘ set down by our Author; as Wormwood, Gentian, Birth-  
‘ wort, *St. Johns Wort*, Centory, they recommend likewise the  
‘ Vulnerary Herbs about Geneva, or the Neighbouring Moun-  
‘ tains; as the Mountain Betony, Ladies Mantle, Sanicle, both  
‘ the Winter-greens, Mountain Angelica, Liver-Wort, Pert-  
‘ winkle

winkle : To which, if you dare use Aperient Remedies, may be added Golden Rod : These Simples, given either in Wine, or some Water, or Broth, are of Great Virtue in Internal, or External *Inpostumes*, or *Ulcers*, as also in all Wounds, and Falls from High Places. The Powder of Mumny with Myrrhe, Gum Arabick, Amber, Japan Earth, Red Coral, Liquorice, the Diaphoreticum Martiale, adding sometimes a small Quantity of Opium ; as half, or a quarter Part of a Grain for a Dose. The Decoction, or Gelly of Vipers is proper likewise ; as also the Balsam of *Tolu*.

## C H A P. XXIX.

### *Of making Bloody Water.*

**T**HIS Distemper manifests it self sufficiently by its Name, for making of *Bloody Water* is nothing else ; but the voiding of *Urine*, that is *Bloody* ; or mix'd with Blood, which Blood Staining the *Urine* commonly comes from the Kidneys, Bladder, and other Parts, Officiating in the Voiding of *Urine* ; and therefore we take Notice of it here, as treating of the Distempers of the Kidneys and Bladder. The Ancients reckon'd four ways, by which the Blood could get out of the Vessels ; and these are *Anastomosis*, *Rhexis*, *Diapedesis*, and *Diabrosis*. The *Diapedesis* or Transudation cannot be the Cause of any Flux of Blood ; because its Consistence is too Thick, to Sweat through the Pores of the Vessels : As for the *Anastomosis*, or the opening of the Extremities of the Vessels, caused by Hot and rarified Blood, it cannot take Place in this Distemper ; the *Rhexis* then, and *Diabrosis*, that is a Rupture and a Corrosion of the Vessels can only be the occasion of the making of *bloody Water* ; a Blood Vessel is corroded, and eaten in the Kidneys or Bladder by sharp Humours, a rough Stone, that is Stirr'd and Agitated by Riding, Walking, or any other Exercise, and so wears out, and tears the Veins and Arteries by its Ruggedness ; but a Blood Vessel is broke by a Contusion, or Blow in the Back ; or because of the abundance of Blood, too much distending the Vessels, as it happens in an Inflammation of the Kidneys ; or its too great a Fermentation. The lifting, or the carrying of too great a Weight, which *Riverius* puts among the Causes, that break a Vessel in the Kidney, or Bladder, cannot easily occasion *Bloody Urine* ; because that, if a Blood Vessel should break by Lifting or Carrying, it would

would without doubt break rather in the Lungs, or other Parts, that are Strained; than in the Kidney, or Bladder. In a *Gonorrhœa* likewise, Blood nay Matter also may come away through the *Urebra*, by a Corrosion and Exulceration of this Canal, caused by the very sharp Veneral Venom; whence the Blood, and Matter are taken away by the *Urine*, that runs through it, and so are voided with it.

The *Diagnosis* of this Distemper is Obvious to the Senses; for the Bloody *Urine* that looks like *Water*, that Meat has been Wash'd in, in which sometimes there are Clods of Blood at the Bottom, may easily be seen. The Part Affected is known by the Situation of the Pain; for if it be felt in the Region of the Loyns, it shews, that the Kidney is Affected; that is with an Ulcer, Inflammation, Stone, &c. But if the Pain be in the *Hypogastrick* Region, the Bladder is in fault; or Lastly, if it be at the Root of the Yard, then the *Prostata*, or the *Urebra* are affected; besides the Blood flows in greater Quantity from the Kidneys, and stains the *Urine* more, than coming from the Bladder: and from the Bladder it Stains the *Urine* more, than, when it comes from the Urinary Duct. The *Diagnosis* of the Causes, that produce this Distemper is such that, if it Proceeds from a Stone, you shall see the Signs already mentioned; in the Absence of which you must accuse the Abundance, and Effervescency of Humours, which shall be manifested by a *Pletora*, or a Fever; if a Blow, Fall, or Wound have been the Occasion of this Distemper, you shall either see it, or hear it from the Patient; if Lastly it Proceeds from an Ulcer, or Inflammation, you shall have the Signs, which we just now mention'd; and in the Absence of the other Causes impute it to the Acrimony of the Humours.

The *Prognosis* of this Distemper is various, according to the Quantity of Blood, and Matter voided, and the time it lasts; therefore if the voiding of Bloody *Urine* be copious, frequent, and lasting it is Dangerous, and if it proceeds from an Ulcer, Inflammation, or Stone, the *Prognosis* must be the same, with that of the aforeaid Distempers, which we need not repeat.

The Cure also is to be Variously managed, according as the Causes differ; if a Stone Inflammation, or Ulcer produces the Distemper, it requires no other Cure, than what we propos'd, Treating of those Distempers; in the  
Abundance

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abundance or Effervescency of Humours, Bleeding must be again, and again repeated: The heated Blood is to be cooled by Remedies, which we have often quoted: In an Ulcer or the Acrimony of the Humours prescribe a Bath, Milk, Emulsions, Turpentine, Balsam of Sulphur terebinthinated, *Laudanum*, the Narcotick Syrup, Spirit of Turpentine, a *Bolus* of Cassia with Turpentine, and Powder of Liquorice; as likewise any thing made of Rice or Almonds; which must be succeeded by Adstringent Decoctions of Comfrey, Plantain Leaves, or Knot-grass, Milfoil, red Roses, Balaustians; the Troches also of *Gordon* with Milk are very good in this Distemper; as also Powder of Coral, Seal Earth, Troches of Carabe with Rose or Plantain Water, and Syrup of Roses, the Powder for a Fall, &c. *Topica* and outward Applications can do no good here; unless it be an Adstringent Fomentation on the Back, or the Belly of Oxycrat, or a Decoction of adstringent Herbs. Lastly, Mineral Waters are not to be omitted, which are of Wonderful effect in this Distemper; if the Blood comes from the Bladder, or the *Urethra*, and that Injections must be used, let them be Adstringent, and Cleansing, or Consolidating, such as we proposed in the Cure of an Ulcer: in the mean time the Universal Remedies must not be neglected; as Glysters; when the Body is bound, prescribe often a Purge of Cassia, and Manna with compound Sprup of Succory; and Bleeding is to be repeated as often, as the Physician shall think Fit.

#### N O T E.

\* In the making of Bloody *Urine* they use all what is Proper in other *Hamorrhagies*; if it proceeds from the Bladder, they make an Injection of Plantain Juice, and *Hæmaridis*. The Powder of the same is given inwardly in an Emulsion of the Seeds of Poppies, Cudwort, Melons, &c. You may try likewise the *Hypocacuana*; which by Experience is known to Cure more other *Hæmorragies*, besides the Bloody-Flux.

## C H A P. XXX.

### *Of the DIABETES.*

**T**HE *Diabetes* has its name from the Greek Word *διαβαίνω*, which signifies to Pass, or run thorough, because the voiding of the Urine is so quick, and frequent in this Distemper, that it runs Through the



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Urinary Passages, no other ways, than Water through a Pipe. It has also other Names; as the Chamber-pot Dropsy, because those that are troubled with this Distemper, by continually making Water, fill the Chamber-Pots; and *Dysfacos*, because of the Drought, that attends it. The Distemper is very rare, and *Galen* Asserts, that he has seen it but twice in his Life; which has made some doubt, whether there was such a Distemper, and others say, that it was a Symptom of Drought, so that, say they, they void abundance of Urine, because they swallow abundance of Liquor; for the more we Drink, the more, and the oftener we make water, as great Drinkers can witness: Yet neither one, or the other have reason to persist in their Opinions; for *Galen* has not only seen this Distemper, but also *Forestus* in the 24 Book of the Distempers of the Kidneys. *Dodonaus* in his Book of Observations Chap. 32. *Zacutus Lusitanus* Observation the Eight, and Twentieth Book. The Practice of *Rolandus* Cure 30, and 302. with many other very Credible Authors. That it is not a Symptom of Drought appears, by the Thinness and Emaciation of the Body, which not always attends Drought; as also, by that they void Urine in great Quantities, before ever they crave Liquors; as Authors testify. Therefore the *Diabetes*, is so far, from being a Symptom of Drought, that the Drought is rather a Symptom of the *Dialyses*. For the reason, why they are so Thirsty in a *Diabetes*, is, because the Body dries away, by the great Quantities of Urine, that are voided; but if by Reason we might prove the Existency of this Distemper, is it not possible, that by some peculiar Contexture of the Mass of Blood its Vehicle the *Serum* should be separated from it, and strained through the Kidneys more Copiously than it should be? Certainly that may as easily be, as its being voided through the Pores of the Skin; which, that it happens in form of Sweat, is proved by the Distemper, that is called *Sudor Anglicus* of which *Willis*, *Sennertus* and other Authors Treat: Where there is such Sweating, that all the Blood seems to be dissolved to *Serum*, and hardly any Linnen Suffices to wipe off the Sweat. By what is said the Nature, and Essence of a *Diabetes* may be easily understood; it is then an Immoderate Looseness of Urine, or a very quick and copious Voiding of limpid Urine

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Urine, attended with excessive Drought ; and a Dissolution of the whole Body : Some add to the Definition of a *Diabetes* the Voiding of the Drink altogether unaltered ; which, tho' it may be said to be true after the Patients have filled themselves with Liquors, yet absolutely is false : For if the Distemper commonly begins by an excessive voiding of Urine before they Drink much, then a *Diabetes* can not be said, to be a voiding of the Drink unaltered by Urine.

The Cause of this Distemper, which the Ancients alledge I shall not meddle with: But with *Willis* I think it is a Loose Contexture of the Mass of Blood, and the Humours, and, as it were, a Draining of them, Whilst they are dissolved to *Serum* ; which happens by defect of the Coherence, that in the natural Estate is used to be between the *Serous*, and the Fat or Sulphureous parts of the Blood ; which Coherence, and Mixture between Fat, and watery Liquors is not easily made, as appears in Oyl and Water ; which can hardly, and not without the help of Salt be united ; in the Blood, which consists both of Fat, and serous Humours, it ceases, as often, as the Salt their common tie is either wanting, or changed from Salt, to sharp Volatile ; whence, what is serous in the Blood is separated, and is, as it were, poured through the Pores of the Blood, and precipitated in the same manner, as Water by Sea Salt very well mixed and united with Oyl, would be Precipitated, and slip Through, from between the Oyl ; if the Salt was taken away ; so, I say, the *Serum* is separated from the Blood, when the Watery, and Sulphureous, or Fat Parts of it are not very well united, by defect of the natural Tie, or the Saline Salt, indued with a peculiar Figure, which naturally ought to be in the Blood, to tie the Parts together. The reason, why Fat and Watery Liquors will not mix well without Salt ; is, because the Particles of the Fat Liquors are Slippery on their Surface ; as well, as smooth and round ; and those of the Water are oblong Cylindrical, and likewise no ways Rough ; so that, being poured together, they fall from, and can not take hold of, one another ; but when the Salt is put to them, and melted in the Water, with its hooky, sharp Particles it easily fastens to the Branchy Particles of the Fat Liquors ; but how true it is, that the Salt is wanting in

the Mass of Blood, or at least that that, which naturally is contained in it, is changed into a sharp, volatile, and alkaline Salt, and can no more officiate, as a Vehicle, is proved by the Sweet Taste of the Urine; which *Willis* asserts is always in this Distemper, and naturally in the Urine should be Salt. The *Serum* then thus easily separating from the Blood is by the Kidneys easily received and strained: Which is help'd by the Relaxation of their Strength Precipitating the Urines without any Fermentation.

Those are voided in great Quantity; not only, because they slip through the Pores of the Blood, by reason of its loose Contexture; but also, because, by the copious Drinking of Water and other Liquors, the Blood is more diluted: Whence the Looseness of Urine is maintained. Nay *Fabritius Hildanus* says, Observation 50 or 105, that this Distemper has been occasioned by excessive Drinking of Water, washing away the Salt of the Blood, and Loosening the Substance of the Kidneys.

The *Diagnosis* of this Distemper is wholly contained in the Definition: As to the Thirst: The reason of it is the Evacuation of the *Serum*, by which the Body, and Membranes are dried, and wrinckled; the Leanness and Consumption is owing to the Blood, and the nourishing Juice, in its Consistence unfit to be Joyned to the Parts, to be nourished; or the Lympha, that should nourish the Parts, but being too much dissolved, comes away with the Urine.

As to the *Prognosis*: A *Diabetes* must be fatal; for it can not easily be cured, and flings the Patient suddenly into a Consumption.

The *Diabetes* is cured not by Bleeding, unless it is done by reason of a Plethora; but such things, as are able to correct the excessive Fluxing, and Looseness of the Blood; such are Adstringent, Thickning, and Subacid Medicines; to which, because the Body falls away, you may add Restoratives; as a Decoction of the Extremities of Animals, Milk, soft boyled Eggs, Gravy, a Decoction of Capons, Partridges, Confection of Hyacinth: Yet you must not so insist upon the use of these Remedies, as to neglect Adstringents; as a Decoction of Plantain Leaves, Sorrel, Purslain, red Roses; Syrup of Coral, Pearl; Plaintain or Quince Juice, with an appropriated Syrup, of dry'd Roses, Quinces, &c. Narcoticks are likewise of Use;

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Use ; as *Laudanum*, Syrup of white Poppies : nay Acids Juices, and Spirits are also to be given in small Quantities. In the mean time Glysters may be injected, if necessary ; exhibit also in its proper time a Purge of Tamarinds, Rheubarb, Manna, Cassia in an Adstringent Decoction ; or of Syrup of Succory with Rheubarb : Let his ordinary Drink be an Adstringent Ptisane, or a Decoction of the middle Bark of Oak, with which only *Eraustus* asserts, that he has cured this Distemper in a Child. Bathing is also proper against the Exsiccation of the Body.

#### N O T E.

\* In the *Diabetes* various Medicines of Amber, Opium, and Steel are recommended ; as also Bolusses of Conserve of the Roots of Comfrey, with Adstringent Roots Powdered, Bole Armoniack, &c. Chalybeat Milk, or that in which Hot Eliars have been Quenched.

### C H A P. XXXI.

#### *Of the Incontinency of U R I N E.*

**T**H O' the *Incontinency* of *Urine*, which properly speaking is the voiding of it against our Will, belongs only to People awake, yet the Authors stretch it out likewise to those, that are asleep ; which void *Urine* plentifully in their Sleep, and piss a Bed : This happens to them from two Causes ; either because of a Debility of the *Sphincter* of the Bladder, which, tho' it shuts the Bladder in the day time exactly, and keeps the *Urine* ; because more Spirits are sent to it, while we are awake ; yet in the night when the Spirits flow not to it in such a Quantity, and are, as it were, retained in their Spring, is relaxed, and so lets the *Urine* run out : Or it may happen also from an Habit, and Custom contracted in their Infancy, by which the Animal Spirits, when the Patients are asleep, as well, as when they are awake, are carried through the Road they are used to, not to the *Sphincter*, but the Muscular Fibres of the Bladder ; to which the



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Acrimony of the Urine, stimulating the inner Tunick of the Bladder, contributes abundance. Lastly it may proceed from vain Dreams, or an Errour of the Imagination; by which, there being no fault in the Bladder, or its *Sphincter*, they fancy, that they piss against the Wall, or some other Place; concurring to this the Acrimony of the Urine, or its great Quantity, occasioned by Drinking too much.

But that *Incontinency of Urine*, which happens to them, that are awake, can proceed from no other Cause, than the Slackness of the Sphincter; and the Influx of the Spirits in to it being hinder'd, either by a Dissolution of Strength all over, as in those that are near Death; or a *Palsy* of one Side; or by a Fault nearer related to the Sphincter, that is a *Palsy* of that Muscle it self; or an Obstruction of the Nerves, that carry the Animal Spirits to it: From all which Causes an Involuntary Emission of Urine must follow; the Sphincter being relaxed, and for want of Spirits not able to contract it self, to shut the Neck of the Bladder. Cutting for the Stone may also occasion this Distemper, when the Muscular Fibres of the Sphincter, or the Branches of the Nerves in these Parts are cut asunder. Ulcers likewise in this place may, by Corroding the same Parts, inflict this Distemper.

The Signs of the Causes are no less Evident; for if Weakness, contracted by a long Fit of Sickness, or the *Palsy* of one Side are the Occasion of this Distemper, it may easily be known; and so it may, if it proceeds from, Cutting for the Stone, or an Ulcer; and where the Signs of all these are absent, you must impute it to the Relaxation of the Sphincter, from an Obstruction of the Nerves; especially if it happens to People, when they are awake. But the Cause of the *Incontinency of Urine* in those that are asleep, shall be Learn'd from the Patient or those about him; of whom the Physician may know, whether it comes by dreaming, and an Errour of the Imagination, or a bad Custom.

As to the *Prognosis*: This Distemper is more dangerous, and difficult to be cured in waking People, than in those, that only have it asleep, and in Old Men, than in Children and others. In an Acute Fever the Involuntary voiding of Urine is dangerous. For it signifies a Prostration of the Strength; either caused by a Delirium, or

Errour

• Error of the Mind, which are both bad. In Children the *Incontinency* of Urine is commonly cured, as they grow up; but if it lasts, till they are 25, it is incurable.

The Cure of this Distemper; when it proceeds from another, that defects the Strength, or brings a Delirium, or the *Palsy* of one Side, or an *Ulcer*; must be performed by Remedies, that are proper in these Distempers; but if it comes from Cutting for the Stone, it is incurable: that which happens only to people asleep is to be cured by correcting of the Imagination, or Interrupting of the Custom; which is done by Threatning, Blows, especially in Children, or adorning the Places, which they dream that they Piss against, with things that are costly or Venerable; all which, with many other things are used to change, or correct the Habit, and Errour of the Mind. It remains now to speak of the Cure of the Relaxation, or the *Palsy* of the Sphincter of the Bladder, which most commonly is the Cause of this Distemper: And first, as to the Universal Remedies: Bleeding is of no use here; for nothing indicates it, unless there might perhaps be a *Plethora*: But Purges are to be frequently used; of Senna, Diacarthamum, Jalap in an opening and heating Decoction of Origan, Calamint, Rocket, Chervil, Mint, or give the Pills *Cochia Minores*; adding some Gum Armoniack, dissolved in Wine, and thickened again. Prescribe first Emollient, afterwards stronger Glysters, made of an attenuating Decoction of the aforesaid Herbs; Anise, and Cummin seed, the Flowers of Chamomill, the tops of Thyme, and Dill. The particular Remedies must be Sudorificks, and Diaphoreticks; of Guajacum, Antimony, Sassafras, China, Sarsaparill, Hot natural, and Artificial Baths, Cinnamon, *Aqua vite Matthioli*, Spirits, Volatile Salts, opening Apozems, Chalybeats, Mercury, Broth of attenuating Herbs; and all things, that are recommended in the Cure of the *Palsy*. Outward Applications, that can be applied to the Perinæum are Fomentations of Hot and attenuating Roots and Herbs, mixt with Astringents: the Roots of Elecampane, Ginger, Galingale, Sweet Costus, with Mint, Sage, Rosemary, Wormwood, Anise and Cummin Seeds; adding Cyprus Nuts, Balaustians, Roses: Or a Bath of the same, or Hot Mineral Waters; or apply to the part affected Linnen Cloths, dipped in Wine, Brandy, or Hungary Water, to be often wetted.

## NOTE.

‘ In the *Incontinency of Urine* are recommended Calamint-Mint, and especially Agrimony, and its Seeds, Plantain, Horse Tail, St. John’s Wort, and its Flowers, Acorns, Galingal, the Wood of Aloes, a dram of it being given in Wine, or a soft Egg twice a day for several days. Castor is proper if the Nerves be affected, and the Distemper is Paralytick, Mastick is praised likewise; a Dram of it in Wine.\* Frankincense, Myrrhe, Gum Arabick, the Gullet of a Cock roasted and powdered, taken in red Wine about Bed time, is counted a Secret: the Testicles of a Hare burnt, or the following powder. Take of the Ashes of a Hedghog three Drams, of the inner Coat of a Hens-gizzard, of Agrimony, each an Ounce; make a Powder: The Dose is a dram in Wine.

‘ The Bladder of a Sow, or a Wild Boar, or a She-Goat Powdered may be given in the same Dose: some prescribe the Powder of a Toad burnt alive in a new Pot; to be hung about the Neck for an Amulet.

‘ Externally they use Fomentations, and Baths of Wormwood, Balaustians, Oak Leaves, Bistort, Comfrey, Galls, Myrtle Berries, &c. Inunctions with Oyl of Wormwood, Mastick, Mint, Myrtles, Quinces, and if there be a *Palsy*, Oyl of Spikenard, Castor, Pepperwort, and Balsam of Peru. Some lay a Plaister of Oxycroceum on the small of the Back.

‘ In a Nocturnal *Incontinency of Urine* some praise the Powders of the Cups of Acorns; and of Castor; from a Scruple to a dram, as also the Powder of the Lungs of a Kid roasted: Seal earth, a dram of it in Pellitory Water; some recommend the eating of boyld Mice in the same Case, others apply a green Frog split and apply’d to the Kidneys.

## CHAP. XXXII.

*Of the ISCHURY and STRANGURY.*

THE Urine not only comes away immoderately, or involuntarily, as we have said, when treating of the incontinency of Urine, and the Diabetes; but is often also either totally stopt, or comes away by drops, with Pain and Heat out of the *Urethra*; whence other Distempers of the Bladder arise, viz. an *Ischury* and *Strangury*; as also a *Dysury*, of which we are to treat here.

An *Ischury* then is a total Suppression of Urine, which if it happens, when the Urine is in the Bladder retained  
by

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by the Bladder's Fault, it is called a true and Legitimate *Ischury*; but, if it comes from a Fault in the Kidneys, or *Ureters*, the Bladder being empty, it is call'd Spurious.

A *Strangury*, is not a total Suppression of Urine; but such a one, as lets the Urine only come out by Drops, and is by another name call'd *Stillicidium Urinae*.

Both Distempers, the Legitimate *Ischury*, and the *Strangury* have altogether the same Causes; only more, or less Violent; and the one stops totally, and the other hinders but partly the Flux of the Urine. The Causes, that can effect this, are; First the Sense, and Motion of the Bladder taken away, or diminished; and that either by a Palsy, or an Obstruction of the Nerves, that serve the Bladder, and its Sphincter, which makes, that it cannot be provoked to an Excretion by the Sharpness, or Quantity of the Urine, and so cannot perform its Contractive Motion; or because the Spirits are not dispensed to this Part, to make the Sense and Motion, but are employ'd elsewhere; as it is in Delirium's, and sleepy Distempers: The cold Temper of the Bladder, which *Riverius* puts among the Causes of an *Ischury*, and *Strangury* of the Kidneys, can have no place here; unless perhaps he understands a Palsy, or a Gangrene by this frigid Temper: An other Cause of these Distempers is a Stoppage of the Passage of the Urine; that is, when the Orifice is shut, through which the Urine is to be voided; either by a Tumour in the inflamed Neck of the Bladder, or the Urethra, a Scirrhus Impostume, the Excreescency of Flesh from an Ulcer, or a Stone near the Sphincter, or Urinary Passage; or also by a Clod of Blood, that hinders the Passing by of the Urine.

A Compression of the Neck of the Bladder from a Tumour of the adjacent Parts, as the Uterus Swell'd by an Inflammation, *Scirrhus*, or a large Child, may also cause a Suppression, or a Dropping of Urine; likewise the Swelling of the Strait-Gut fill'd with hard Excrements in a Costiveness, or the Fundament tumified by large Hemorrhoids; too great a quantity of Urine, too long retained in the Body of the Bladder; by Business that hinder'd, or time and place not convenient for the making of Water; may produce the same Distemper, in so much as distending the Membranes of the Bladder excessively, and advancing it,



as it were, beyond its Bounds, it straitens its Muscular Fibres, and makes them very Weak; so that the Spirits have no easy Entrance into them, and cannot give them that Power, which is required to contract the Bladder.

A Spurious *Ischury* is that Suppression of Urine, which happens, the Bladder being empty, and receiving no Urine: The only Cause is an Obstruction or Stoppage in both Kidneys; tho' *Riverius* assigns others; this Obstruction proceeds from a Stone, possessing the whole Substance of the Kidneys, or abundance of little Sands, or an Inflammation, Impostume, great Ulcer, possessing the whole Substance of the Kidneys; or Lastly from the Blood's copiously running into the Kidneys, and by its quantity hindering the Straining of the *Serum*: As *Riverius* observes of a Man Afflicted with a Suppression of Urine, from whom a Catheter being put into his Bladder, nothing came forth; and that yet made Water plentifully after being Bled, feeling it sometime after the Bleeding fall down from the Kidneys to the Bladder; but why, one Kidney being stop'd, the other neglects its Duty most commonly, whence a total Suppression of Urine followes, as the same has observed in a Man, that had a very great Swelling in the Groin, which squeezed the Ureter on the left Side; the Reason of it is that, when the Urine is not strained through one Kidney, the Blood and *Serum* Flow Copiously to the other, and by their great quantity making a Distension, Stop up their own Passage.

The *Ischury*, and *Strangury* are so plain by their Definition, that it is needless to give a further *Diagnosis* of them; but the Causes are not so easily Distinguish'd; if a Stone occasions these Distempers, you shall see the Signs of the Stone mentioned not long ago: If Tumours of neighbouring Parts; as the Uterus, and Strait-Gut produce the Distemper; as an Ulcer, an Inflammation in the Neck of the Bladder; or a *Caruncula*, you shall see their Signs. But the Obstructions of the Urinary Passage are known by thrusting a Wax Candle or Catheter into it.

If too great a quantity of Urine be the Cause, by being too long retain'd in the Bladder, you may know it, by the Swelling of the Hypogastrium from the distended Bladder. But if the *Ischury*, or *Strangury* proceeds from the Sense of the Bladder being taken away, the Influx of Spirits being hinder'd, or their being call'd off elsewhere; there shall

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shall be Delirium's, Sleepy Distempers, or a Palsy in the Bladder; which Palsy in the Bladder shall be especially known, by that the Urine makes no Stimulation in the Bladder; or that there are none of the Signs of the other Causes.

The *Diagnosis* of a Spurious *Ischury* is fetch'd from the emptiness of the Bladder; because there is no Distension, no Swelling, or Weight, no Stimulation in the Bladder, and chiefly from that there follows no Urine, the Catheter being put into the Bladder.

The Signs of these Causes are such; if Stones, or Sands possessing the Kidney bring the *Ischury*, their Signs are there; if an Inflammation and Ulcer produce this Distemper, their Signs above-mentioned shall also shew themselves; if Lastly it proceeds from too great a Repletion of the Vessels, and that the Humours fall down on the Kidney, it shall be manifested by a *Pletbora*, and the absence of the other Causes.

As to the *Prognosis*, a Suppression of Urine is very Dangerous, and Mortal if it Continues beyond the fifth Day.

The Cure of an *Ischury*, and a *Strangury* is the same; as proceeding from the same Causes; yet it differs, as the Causes, that bring both the Distempers, differ: A Legitimate, as well, as Spurious *Ischury*, proceeding from a Stone in the Bladder or Kidneys, must be cured by Remedies proposed in the Cure of the Stone there. Yet the Stone being in the Bladder and producing this Distemper, the Patient must be laid on his Back with his Legs drawn up, that the Stone may fall Back in the Cavity of the Bladder; or the Stone may be removed with the Catheter to let out the Urine; which may also be done through the Catheter; if by its Quantity it troubles, and distends the Bladder. If a little Stone is got in the Urinary Passage, or *Urethra*, and stays there, its Exclusion must be promoted by thrusting it forward with the Fingers, Softening the Yard with Bathings of Milk, Oyl, or an Emollient Decoction; or setting the Patient into a bathing Tub.

But that *Ischury*, or *Strangury*, which proceeds from a Tumour, Ulcer, Inflammation of the Kidneys, or Bladder requires no other Cure, than that, which we said was proper in those Distempers, when we treated of them; as also, when they proceed from Tumours of the Neighbouring Parts; as the Hemorrhoids, an Inflammation of the Uterus, or the Strait-Gut. When a *Pletbora*, or  
a Re-

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a Repletion, and Distension of the *Emulgent* Vessels hinders the Separation of the Urine; and that so follows its Suppression, it Cured by large Bleeding.

But when this Suppression is caused by a Caruncula, belonging to a *Gonorrhœa*, or by the excessive Quantity of Urine, then put in often a little Wax Candle, rub'd with Oyl of Sweet Almonds, or a Catheter to let out the Urine: The same must be done in all Cases, to ease the Patient; as in an Inflammation, Tumour, Ulcer of the Bladder; or a Tumour of the Neighbouring Parts, that may stop the Urine. When it is occasioned by Sleepy or Nephritick Distempers, it must be cured by Remedies accommodated to them. But when a Palsy Causes it, then attenuating, Spirituous, Diaphoretick, in short Hot Remedies must be used; outwardly apply Hot Cataphasms, of Pellitory, or Hot Fomentations with Oyl of Scorpions, Hungary Water, Brandy; not neglecting Phlebotomy in any Cases, if it be necessary, with Glysters and Purges.

N O T E.

' In most all *Ischuries*, after the Injection of a Glyster, the Cure ought to begin with Bleeding; nay in both Arms, if the Patient be Plethorick; and afterwards Purges are to be given, First of Oyl of Sweet Almonds, and the Pulp of Cassia; then you must proceed to Stronger Remedies, that stimulate the Bladder, as well, as the Guts, by Reason of the *Consensus* it has with them: not forgetting in the meantime external Lenitive, and Emollient Bathings, Fomentations, Embrocations, Cataphasms, &c. Lastly you must use Diureticks, such as are prescribed in the Chapter of the Stone in the Kidneys.

' If the *Ischury* proceeds from an Obstruction of the Nerves, use a Decoction of Penny-Royal, Calamint, Rue, Castor, and the like, partly to be drunk, and partly for Injections for the Bladder; Fomentations, and Glysters of the same Remedies are proper, adding to the Glysters Turpentine, Oyl of Scorpions, St. John's Wort, and Juniper. If the Urine be Suppress'd, from too great a Distension of the Bladder, prescribe Fomentations of Pellitory, Cammomil, Dill, Melilot, Line-Seeds, Fenugreek, Penny-Royal, Origanum, the Roots of Lillies; likewise Cataphasms of Onyons, whose Juice also with stale Oyl of Nuts, and White Wine is much recommended; as likewise a Cataplasam of Rape-Root and Cresses.

' If clotted Blood, stops the beginning of the Urethra, besides those things, that inwardly taken dissolve clotted Blood Hot Cow-dung applied to the *Perinaum*, Privy Parts, and the  
' neigh-

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'neighbouring Places, is an expert Remedy: If you can get none so newly laid, make use of the same dung tho' staler mixed with proper Oyls.

'If the Yard, or the Neck of the Bladder are swelled, use Brook-lime, with Flowers of Camomill for a Fomentation, or Cataplasim. Some make this Experiment without the Patient's knowledge, to put his Feet in Hot Water; the Fright of which they assert makes them make water presently.

'Where you suspect an Ulcer, and Matter, you must use Vulnerary, and cleansing Remedies. Where the Matter is vitious, three, or four Ounces of Lemon Juice are approved of. In the Strangury Liquorice, Marshmallows, Purslain; the smooth Sowthistle, the Flowers and Seeds of Violets, Flowers of Water Lillys, Camomill, Winter Cherries, the greater Cold Seeds, Pine apples, Pistick Nuts, Orange Peel, and the Oyl of the same; especially in a Strangury proceeding from a cold Cause, or Crudity, in which case Nut-Megs, and some drops of Oyl of Amber are likewise recommended; a Decoction of Turneps, as also of Wintercherries with Rayfins and a dram of Balsam of Peru are Specificks.

'Stranguries caused from Crudities are cured by generous Wines, that Hot Flints have been often quenched in; Crabs Eyes, a Lye of Egg-shells made with Wine; Salt of Bean-Stalks, and Tartar, Tincture of Tartar, and a Scruple of Borax.

'They recommend also in all Strangurys the Juice of Cray Fish in Wine, or some proper Water, or with bruised Radishes they are boyl'd in Wine, the Vessel being well stop'd, and whilst they are a boyling a Chair with a Hole is clapt over it for the Patient to sit on, and so receive the Steam; others for the same Distemper make Water in Hot Embers; or use Chalybeat milk, Oyl of sweet Almonds, &c. see the Chapter of the Stone.

## C H A P. XXXIII.

### *Of a D Y S U R Y.*

**B**Y the Name of *Dysury* the Authors understand nothing else; but a Painful making of Water; which others also have been pleased to call Heat of Urine: tho' some confound this Distemper with the Stangury; because in that is also a Difficulty of making Water; yet we chose rather to Treat of the Strangury together with the Ischury, because they depend upon the same Causes, and are cured by the same Remedies; and to seporate all Painfull making



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making of Water from the said Distempers; because of the difference of the Causes and Remedies. It differs from a Strangury; because in that, the Water is made in less Quantity, and by Drops; and in a *Dysury* it is voided in a greater quantity, and one continued Stream; only with Pain.

The immediate, and nearest Cause is a Separation of the Whole, or *Solutio Continui* in the *Urethra*; for the Pain cannot proceed but from a *separated Unity*; which may be occasioned by several Causes: First from the very Acrimony of the *Urine*, that is too much sometimes impregnated with Salts; by which it excoriates, and makes raw the *Urinary Passage*; whence the Feeling being now more exquisite, a Painful making of Water follows: it is caused also by the *Urine's* being too strong, and too much fill'd with sharp bilious Particles; as in Fevers and Inflammations of the Bladder and Kidneys, or by the Matter derived from an *Ulcer* of the Bladder or Kidneys, that is mix'd with the *Urine*, and being commonly very sharp and corrosive, corrodes and vellicates the *Urethra* as it runs along. The same Painful making of Water may proceed from sandy *Urine*, that is full of little Sands, which being rough and sharp, excoriate the *Urethra* whilst they come out with the *Urine*. If your white and milky *Urine*, which is often voided copiously for a great while, and which has not its Colour, as vulgar Physicians think, from Matter, nor yet from raw Ghyle; if this, I say, brings a Heat of *Urine*, it is only because it is loaded with Salts, or with Sands that are apt to excite a Pain in the *Urethra*; an *Ulcer* also or *Inflammation* in these Parts, because it makes the Feeling more exquisite, may bring a *Dysury*, tho' the *Urine* recedes not from its Natural State; as we see, that the external Parts when *Inflamed* or *Ulcerated*, feel Pain upon touching of any thing, tho' very sound. Thus in a *Gonorrhoea*, where there is an Exulceration of the *Prostate* at the end of the *Urethra*, caused by the Venereal Venom, we always observe a heat of *Urine*.

I shall give no Diagnosis of a *Dysury*, because it is manifest; but the Causes are distinguish'd: if it proceeds only from that Acrimony and Heat of the *Urine*, it shall have a high and flaming Colour; it shall be much stained with the Gall; there shall be an Inflammation of the Kid-

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neys or Bladder, or a Salt Constitution of Humours in the Body; if it is caused by little Sands, or a Sandy Matter, it shall be known by the *Urine*, and the Signs of the Stone; if Matter occasions it, the Diagnosis may be had from the Signs of an *Ulcer* in the Kidneys or Bladder, nay from the Matter it self, which shall appear in the *Urine*, and make it Fætid. Lastly, if an *Ulcer*, *Inflammation*, or *Gonorrhœa* be the Occasion, it shall be manifested by the proper Signs of those Distempers.

As to the Prognosis: This Distemper is not dangerous in it self, yet is very troublesome to the Patient; according as the Causes vary, it is either easy or difficult to be cured.

A *Dysury* proceeding from an *Ulcer* of the Kidneys Bladder or *Urethra*, an *Inflammation*, *Gonorrhœa*, or the voiding of Stony and Sandy Matter, must be cured by Remedies, usually prescribed in the Cure of those Distempers, and to be fetch'd from their proper Chapters; adding now and then Narcoticks to mitigate the Pain. That *Dysury* which is produced from the Salt or bilious Acrimony of the *Urine*, must be Cured by repeated Bleeding; a Bolus of only *Cassia*, or with some Powder of *Liquorice*, and Turpentine often exhibited, or a Draught of *Cassia*, dissolved in a Decoction of Lettice, Purslain, the Tops of Mallows, the Roots of Marsh-Mallows, or the pulp of Tamarinds, with Rheubarb given now and then; a Ptisane of the Roots of Marsh-mallows, Rest-harrow, the Flowers of Mallows, and the four cooling Seeds is also proper; and so likewise Milk, Emulsions, Bathing, Juleps of Water of Lillies, Water-Lillies, Purslain, Wite Poppies, Laudanum, and other Narcoticks; salt and sharp Virtuals must be shunn'd, and soft and mitigating used; as Broth of Young Meat, with Roots of Marsh-mallows, the Seeds of Quinces, and Flea-wort bruised: Whey, and Mineral Waters are recommended likewise. *Forestus* praises the simple Decoction of Mallows, with Syrup of Violets, as also a Decoction of Flowers of Camomil in Milk; some Authors recommend the Troches of *Alkekengi*, a Dram of it in a proper Liquor; Injections are also prescribed for the Duët of the Bladder; to allay the Pain, of Milk, Whey, an Astringent, Detergent, and Refrigerant Decoction, with the Mucilago

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of the Seeds of Quinces and Flea-wort, or Water of the White of Eggs, cooling Fomentations, Glysters, and Gentle Purges are likewise proper.

### N O T E.

‘ In a *Dysury* are prescribed, besides all what is given in a  
 ‘ *Strangury*, Conserve of the Flowers of Mallows, the Mucil-  
 ‘ ages extracted with a Decoction of Marsh-mallows with a little  
 ‘ Nitre ; ten Grains of Sebestens, infused in House-Leek Water,  
 ‘ let the Grains be Eaten, and the Infusion drunk after them.  
 ‘ Milk whey, that the Flowers of Camomill, Blew-Bottle, and  
 ‘ Saxifrage have been boyl’d in ; Turpentine with Syrup of  
 ‘ Violets ; Pills of Myrrhe, Amber, Frankincense, Dragons  
 ‘ blood Diaphoretick Antimony, Gum Arabick, Spanish Li-  
 ‘ quorice, and Turpentine. Wild Betony applied Hot to the  
 ‘ Urinary Parts, they say, mitigates the Pain, and promotes  
 ‘ Urine ; others use Milk Water distilled with Maiden-hair, and  
 ‘ the Flowers of Mallows. See above the Chapters of the Stone  
 ‘ the *Ischury* and *Strangury*.

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OF THE  
Practice of PHYSICK.

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BOOK II.  
Of the Distempers of the HEAD  
and BREAST.

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CHAP. I.

*Of the Cold Temperament of the Brain.*

**A**S we said, (when we treated of the hot Temperament of the Liver) That the Liver was not to be accused ; because the heat, predominant in it, nay, the heat of all other Parts whatever, is originally derived from Blood that is hotter than it should be ; or loaden with active Principles, and sharp Gall ; which with its circular, and fermentative Motion together, produces and maintains the heat in the Parts, and therefore is to be called the true Fountain of Heat : So, treating of the Cold Temperament of the Brain, I think, That the Fault ought not to be laid on the Brain ; forasmuch as, whether it be hot or cold, it has it not of it self, but from the Blood, which is either too hot or too cold ; yet I deny not, but that the Brain, in its natural Constitution, is colder ; that is to say, less hot than many other Parts of the Body ; as the Lungs, Liver, &c. but that is owing to the Blood, that runs thro'

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the Brain not so copiously, and in less Vessels than it does thro' other Parts; nay, this may not only be imputed to the lesser quantity of the Blood, and the smallness of its Vessels; but also to the lesser Motion of the Blood through the Brain, than thro' other Parts; for the Brain, as being the softest part of the Body, retards the motion of the Blood more than other Parts, as being more solid.

The reason why the Ancients said, that the Brain was the *Metropolis* of the Phlegm, was only, that they thought, that all the Phlegm which is voided, as well through the Mouth as the Nose, descended from that part and the Glandule, call'd *Pituitaria*, and was convey'd thro' the Palate, the *Olfactory* Nerve, or the *Processus mamillares*: Which being very false, as appears by Anatomical Experience, we may see, how wrongfully they thought, that the Brain was the Office of the Phlegm; which more properly might be said of the Glandules dispers'd all over the Body, especially about the Neck, Throat, and Tunick of the Nostrils; whose Business it is to separate, and strain the Serum, or Lympha, which is the Phlegm of the Ancients.

The cold Temperament then, if there be any, is always consequent to the cold Temperament of the Blood it self; that is, of the Mass of Blood, destitute of its active Principles, from which it has Motion and Fermentation, and over-charged with spiritless, and earthly Particles; which Frigidity of the Blood, tho' the Signs of it shew themselves throughout the Body, as being wash'd by the Blood in all its Parts; yet exerts it self more in the Brain, as being a very soft Substance, that by its softness lessens the motion, and consequently the heat of the Blood. I shall spend no time about the Division of the Temperaments proposed by the Ancients, that were either simple or compound, and material or immaterial, that is, joined with Matter or without; for this Division is frivolous and vain, because it is impossible, that a Temperament be in any part, unless the Matter of either the Blood, or another Humour that causes it, be present; and besides, the Blood can only be peccant in Heat, or Coldness, Viscosity; that is, Thickness, or Liquidity.

Now let us proceed to the Causes. All things may produce a cold Temperament, that are able to rob the Blood of its thin Sulphur, and fill it with spiritless and unactive Principles; therefore it is no wonder, if in all Distempers,  
where

where the Blood is very waterish, and cold, as a Cachexy, Anasarca, Green-sickness, &c. there be a cold Temperament of the Brain, and the whole Body ; such Causes are cold and moist Food, Old-Age, a cold and moist Country, immoderate Sleeping, a sedentary Life ; in a word, all, as is said, what can make unactive Principles predominant in the Blood.

The Signs of a cold Temperament of the Brain are, besides the aforesaid Causes, a heavy Soul, dull Apprehensions, unhappy Memory, Drowsiness, Stupidity, slowness of Motion, a Palsy, a Catarrh, abundance of Phlegm voided thro' the Nose or Mouth ; Paleness, soft Hair, that is not harsh at all, and grows grey very late or never ; and more other things, that are the usual Symptoms of a Cachexy.

As to the Prognosis, if the cold Temperament be of long standing it is harder to be cured, than when it is newly come, and afflicts the Head with grievous Diseases ; that also which is hereditary, and yields more to Remedies in Summer than in Winter, is not easily cured.

The Cure of this Distemper must be taken from those things which we said, when treating of a Cachexy, Anasarca, Dropsy, Hypochondriack Melancholy, &c. for all things that heat and attenuate, furnish the Blood with spirituous and sulphureous Particles ; as also, all that consume Humidities ; either by Sweats, as Sudorifics, Bagnio's, Diaphoreticks ; or draw the Serum thro' the first Passages ; as pretty strong Purges : Water-purging Remedies are also of use here. As for the six unnatural Things, the Air must be hot and dry, Sleep not be indulged more than Grief or Sorrow ; moderate Exercise is commendable ; the Food must be attenuating, spirituous, fit for Concoction, such as we have often recommended ; and not cold, crude, viscous, and indigested : But, because this Distemper is upheld by a not well officiating Stomach, after Purging you must order digestive Powders of Coriander and Anise-seeds, Nutmeg, Cinnamon, with twice the weight of all of Sugar, or Wormwood-wine. Phlebotomy is of no use here, but well Purging now and then repeated : Sometimes give the *Pilula cochlearis minores*, or *maiores* ; or Agarick : Sometimes the vulgar purging potion with Jalop, or the Electuary Diacarthamum in an attenuating and heating Decoction ; the Apozems also, that are always used in Chronick Distempers, may be

prescribed here, of hot and attenuating Roots and Herbs ; adding Senna, Oak-fern, Mechoacanna, Jalop : Sharp Glisters may also be injected now and then of attenuating Decoctions, with Diaphænicon, Hiera picra, Venice-treacle, and Confection of Alkermes ; a sudorifick Decoction is likewise proper here : But the *Errhina*, or Remedies that provoke Sneezing, Apophlegmatisms, or by chewing Phlegm discharging Medicines, Plaisters and Fumigations, which *Riverius* uses, are out of Date ; yet a Caustick on the back part of the Head, or elsewhere, may be convenient ; and so are hot mineral Waters, both drank, and applied by outward Fomentation ; with many more Remedies to be seen in the Authors.

### N O T E.

‘ The most common, and best of Snuffs is the Powder of Tobacco, which every body now takes without any Necessity ; and seems to have succeeded those strong Medicines with which they purged the Head, even before the times of *Hippocr.* and the smoking of the same, which is used every where, does exceed all *Apophlegmatisms* ; and there have been no Medicines hitherto found out of more Efficacy, to draw the Phlegm, or dry the *Membrana pituitaria* ; only take care of the abuse. The drinking of Coffee, which is not less common, absorbs likewise the superfluous Serum.

## C H A P. II.

### *Of a Sleepy Coma, or Caros.*

FROM what we shall say lower of an Apoplexy, the Nature, Causes, and Cure of those Distempers may be easily gather'd ; for they have all the same Seat, the same Causes, and are cured with the same Remedies. A *Coma*, or *Cataphora* ; which *Avicenna* also calls *Subeta*, is a Distemper, where there is a profound Sleep, of which yet the Patient is waked ; and waked answers, opens his Eyes, and presently drops asleep again ; yet without a Fever. A *Caros* is a degree between a *Coma* and an *Apoplexy* ; for tho' there is a profounder Sleep than in a *Coma*, from which no  
noise

noise or pulling of the Body can rouse the Patient, who can neither answer, nor open his Eyes; yet when he is pull'd he feels it, and the Respiration remains intire, likewise without a Fever. These two Distempers, as appears by the Definition, come very near to an *Apoplexy*, the *Caros* more than the *Coma*; so that they differ not from one another, but in degrees, that is, in the greater or lesser Obstruction, Aggravations, Compression of the *cortical* or *medullar* Substance of the Brain; and Diminution of the Motion, and influx of the Animal Spirits. Therefore all the Causes, which we shall say, that may produce an *Apoplexy*, may in lesser quantity and violence occasion a *Coma* or *Caros*, which we shall not repeat here, not to say twice the same thing.

The *Diagnosis* of them is plain by the Definition; for in a *Coma* they are awaked, they speak and feel when they are pull'd; by which Signs they may be sufficiently distinguish'd from an *Apoplexy*, where there is a difficulty of Breathing, which is not in the aforesaid Distempers.

NOTE.] See lower of the Chapter of the *Apoplexy*.

## CH A P. III.

### *Of a Lethargy.*

**A***Lethargy* is a Distemper in which the Sleeping is like that of the *Coma*; from which the Patients are waked, either of themselves, or by outward Means, and for that time talk idly. There is a Fever besides, which comes near the nature of a slow Fever, and likewise an Oblivion; which Symptoms make this Distemper different from the two aforesaid, and consequently owing to different Causes: This Cause is not a putrifying Phlegm in the Brain, as the Ancients thought; but a slight Inflammation, that is, an inflammatory Disposition of the whole substance of the Brain proceeding from Blood, that is extravasated and dispersed thro' it; and from this Cause the *Phænomena*, and Symptoms appearing in this Disease, may be easily deduced; the Fever, by reason of the Inflammation, which is always attended with a



Fever, it is not high but little ; and like a slow Fever, because the Inflammation is but slight : As for the *Delirium*, that comes upon the Patients when they are waked, proceeds from a parcel of Spirits, which in some part of the Brain, that is near the Inflammation, are disorderly agitated, whilst the others seem compos'd to rest ; I say, a parcel, for all the Spirits are not disturbed ; otherwise there would be Watchings with the *Delirium* ; and no Sleeping, which depends upon the rest of the Animal Spirits ; as Watchings, and *Deliriums*, depend upon their disorderly Motion. The irregular Motion in which the *Delirium* consists, is occasion'd by the Effluvia, or Particles, that come from the Inflammation, and meet with the Neighbouring Spirits. By reason of which concurrence, they are moved more than ordinarily, and flung irregularly on some part or other of the Brain ; or it may also be caused from the heterogeneous Particles sent from the Blood, and stirring the Spirits up to Disorders in some part of the Brain. The profound Sleep to which they are inclined, even when they are waked, proceeds not from a total Obstruction of the Brain ; for then it would be an *Apoplexy*, but only from a stoppage in part, made by the Blood, which slightly inflames, and consequently clogs the Substance of the Brain, and so hinders throughout the Brain the Motion, which is required to keep us awake.

The Oblivion comes from the various wild Fancies by which, when they are awake, their Mind is kept in suspension ; this makes, that they mind not, what is necessary ; so that sometimes they ask for the Chamber-pot, and forget to make Water ; or by reason that the Characters, which were printed in the Brain before, are destroy'd by the stoppage.

NOTE.] See lower the Chapter of the *Apoplexy*.

CHAP.

## C H A P. IV.

## Of a waking Coma.

**T**Here is also another kind of Distemper, which the Authors place among the sleepy Diseases, which is call'd a waking Coma, because they, whom it invades, lying down with their Eyes shut, seem to sleep, yet are awake, and talk idly, and deliriously; when you touch, or speak to them, they open their Eyes and answer, then presently seem to fall asleep again, still disturb'd with various Whimsies, and delirious Discourse.

The Cause of this Distemper, the Antients thought, was Gall mixt with Phlegm, which excited a soft inflamed swelling in the Brain: But we'll rather say, that this Distemper comes from some Aggravation of the Brain it self, by reason of which they are inclined to sleep; which proceeds not from imaginary Humours, but rather the Blood it self, not well circulating in the Brain, because of its Laxity or Obstruction, or the sharp Serum expanded thro' its Substance; but because that Blood or Serum is bad, and full of Particles of a contrary Nature to the Spirits; therefore it is no wonder, that the Spirits are agitated by this matter, and sufficiently disturbed by its Contrariety, to hinder the Patient from sleeping, and to raise various Whimsies and Deliriums. All these Distempers either begin of themselves, and are call'd primary, or else derived from other Distempers, which they attend, and call'd secondary. The *Diagnosis* is easily had from the Description which we have given of them.

As to the *Prognosis*, of all the sleepy Distempers the sleepy Coma is the least; as the *Apoplexy* is the most dangerous; the *Cavos* must be consider'd between both: A *Lethargy* may also be said to be full of danger; and more than a waking or sleepy Coma; because it has more and more grievous Symptoms: In a word, the nearer it comes to an *Apoplexy*, the worse it is.

Besides the Remedies proposed in the Cure of the *Apoplexy*, which have place in all these Distempers; as Bleedings in the Arms, Feet, and Jugular; Cupping, Emetick-wine in Glisters and Potions; Spirit of *Sal-armoniack* Purges,

sharp Glifters ; the Authors recommend *Castor*, and its Tincture ; the pulling out of the Hairs of the Body, sharp Suppositories, hard rubbing, strong Snuffs of *Euphorbium*, white *Hellebore*, Sulphur lit, Antiapoplectick Waters, described in various Dispensaries, or the heavenly Water, and other things to be seen in the Authors. In a *Lethargy* you must not heat so much ; but even cool now and then, because of the Fever and Inflammation : Concerning outward Applications, as young Pidgeons, and Puppies cut asunder in the middle, or the Lungs of a Sheep ; as also Anointings, Blisters, hot Irons, a red hot Frying-pan held near the Head, they are of very little force in these Distempers ; yet cauterizing may prevent it.

NOTE. ] See lower the Chapter of the Apoplexy.

## CHAP. V.

### *Of an Apoplexy.*

THE Fort of Wit, tho' by the solid Fences that surround it every where, and the continual Guard of watching Senses, it is not so much exposed to foreign Invasions, can yet many times not escape the Calamities of intestine Broils, and an always impending Civil War ; but among all the Distempers which furiously attack it, the *Apoplexy* is the chief ; it is so call'd from the Greek, *ἀποπλέττειν*, to strike ; because those that are taken with it, fall suddenly to the Ground, as if they were struck from Heaven : It may be said to be a preternatural Sleep, with a total Privation of Sense and Motion, at least that's visible, except the Pulse, and Respiration, which is not perform'd without Difficulty.

*Hippocrates*, and with him the whole Society of Physick, divide the *Apoplexy* in two kinds ; the one, which is strong with greater difficulty of Breathing, hurries with greater Violence of Symptoms the Patient to his end ; the other is weaker, yet of this, tho' the Symptoms are not quite so bad, few recover ; but what are afflicted with an universal Palsy, or at least a Palsy of one side, by a Translation of the morbidick Matter into the inner Substance of the Nerves.

The

The Ancients lodg'd this Distemper in the Ventricles of the Brain, stuff'd up with Serum, Phlegm, or any other humour, as in its proper Seat ; because they thought, that those Cavities were the Store-houses for the Animal Spirits of the principal Senses, and Instruments of Motion ; the Obstruction of which hinder'd either the Generation of the Spirits, or their Influx into the Parts ; but how much they erred, is manifest to any one that knows but the Principles of Anatomy ; for besides that, the Ventricles of the Brain are often found fill'd with Humidity, almost without the least offence to Sense or Motion ; as the many Observations of the learned *Wepfer* can witness ; they seem unfit for the Generation of the Animal Spirits, and their Separation from the Blood, which can only be perform'd by the Glandules that are in the *Cortex* of the Brain, and from whom all the Nerves take their Origin ; as is proved by the Lucubrations of that great Anatomist *Malpighius*.

Therefore we must leave the Opinion, and forsake the Party of the Ancients, and look for the Seat of the *Apoplexy* elsewhere, which may be known from what has been said just now, *viz.* the Glandules, that constitute the *Cortex* of the Brain, and like Strainers separate the Animal Spirits from the Blood ; as also the small nervous Threads coming forth from each Glandule, like so many excretory Vessels to carry off the Spirits : In all which, if there happens an Obstruction, Compression, or something else, that hinders the passage, or Separation of the Spirits, an Abolition of Sense and Motion must necessarily follow, and consequently an *Apoplexy* ; for all Physicians own, that the Animal Functions depend upon the Regular Generation and Distribution of the Spirits.

The Causes of this Distemper are of two sorts : Some are Internal, and others External ; the Internal are many, first a thick *Lympha*, either stopping the Pores of the Glandules, and so hindring the straining of the Spirits, or possessing the imperceptible Cavities of the Nerves that come from them, and so hindring the Distribution of the same ; an Inflammation, or any other Tumour, by its bulk and weight, squeezing the nervous Canals, and stopping the passage of the Spirits ; abundance of Serum overwhelming the Substance of the Brain ; the Blood being brought in too great a quantity into the Brain, thro' the Arteries ; or its being  
carried



carried back again too slowly thro' the Veins, either way oppressing the Substance and Ducts of the Brain : To these internal Causes some add an imaginary acid Humour that exerts its Power rather in the Head than other Parts; and there fixes and retards the circulating Blood. Among the external Causes, are to be named all those things that are able to thicken the Blood, and either to promote its Flux toward the Head, or hinder its Reflux from it ; as also, those things that can give a *Viscidit*y to the *Lympha*, and a Numness to the Spirits ; all which are adscribed to the abuse of the Six unnatural Things.

The Diagnosis of an *Apoplexy* is plain from the Definition; for those that are taken with an *Apoplexy*, fall down presently, altogether deprived of Sense and Motion ; because the Influx of the Animal Spirits, into the noble and sensible Parts, is denied : They perform, it is true, the most necessary Business of Respiration, but laboriously and with difficulty ; the reason of which is, that the Dispensation of the Spirits into the Muscles, that serve the Respiration, is only partly, and not totally hinder'd ; for since these Glandules of the Brain, whatever they be, and the Nerves that separate and convey the Spirits, set aside for the use of those Parts, must have larger Pores, and be as the Highway and great Road of the Spirits, which they so often pass in Shoals, because of that, from our Nativity so frequently repeated act of Respiration ; therefore they are not so soon oppress'd and obstructed, as other lesser Ducts ; and if some thick humour penetrates into their Substance, as it fills not so easily their Cavity, so it always leaves some passage for the Spirits, into the Parts which they serve, whence the Respiration must be partly, and yet not totally stop'd.

There remains also in *Apoplexicks* the Motion of the Heart, which sometimes keeps, and sometimes loses its orderly Pulsation, according as its Nerves are more or less obstructed ; or the arrival of the Spirits and Blood into it is more or less unequal ; the Explication of which *Phenomenon* is easy, from what we have said already of the Respiration ; for since it is certain, that the Heart not only from our Nativity, as the Respiration, but long before, when the Embrio is yet lockt up in the Recesses of the Womb, performs its *Systole* ; so the Nerves and Glandules of the Brain, that serve this Muscle, must likewise be more ample ; because

of

of the everlasting and never intermitted passage of the Animal Spirits thro' these Parts; wherefore not so easily yielding to obstructing and oppressing Causes, they leave the Spirits a more or less free Passage; the reason why both these vital Functions remain in this Distemper, may also be desum'd from the different origin of the Nerves, that serve the Pulse and Respiration; for they derive their Race not as the others from the *cerebrum*, but the *cerebellum*; which, by reason of its own Density, is less affected in an *Apoplexy*, as that accurate Searcher of the Nerves *Willis* testifies; and is also manifest by Experience it self; because the *Cerebellum* being taken out, or but confused and disturbed through a Hole made in the hind-part of the Head, it is constant that an Animal presently expires, because of the Suppression of the Respiration and Motion of the Heart; which Cessation yet of the Pulse, and breathing follows not, tho' the *Cerebrum* be quite taken out, by an opening made in the fore-part of the Head; in which case, the Animal keeps alive for several Hours, and performs the said vital Functions for a considerable time; whence it is no wonder, that the Heart and Breast cease not to move, tho' the other Parts of the Body, that have their Nerves from the *Cerebrum*, are already deprived of Motion; or at least, that their Motion is not quite taken away, but in a most violent *Apoplexy*; that at once attacking the *Cerebrum* and *Cerebellum*, by stopping the spontaneous, as well as voluntary Functions, skatches the Wheels of Life, and destroys the Patient in a Moment's space.

The Signs of the Causes, that produce an *Apoplexy*, are fetch'd from the Temperament, Age, Humours superfluously abounding in the Body, a Plethora; and if it proceeds from an Inflammation, or any other Humour, it is very hard to be discover'd, and can never be certainly known, but by opening of the Skulls of the defunct Apoplecticks.

The Prognosis to be made in an *Apoplexy*, is comprehended in this one Aphorism of *Hypocrates*; who says, *It is impossible to take off a strong Apoplexy, and not easy to cure a slight one*; From which Words of that divine Sage we may gather, that this Distemper, if any, portends the greatest danger, and is very difficult to be cured.

As to the Cure; the Distemper being the most pressing and violent of all, the Physician ought presently to fly to the  
most

most potent Remedies ; for Extremes are most proper in Extremities ; these are either fetch'd from Surgery or Pharmacy ; for Diet in this Distemper is of little use : The Remedies of the first Order are Phlebotomies in the Arms and Feet ; as also in the external Jugular, which by reason of the veiny Branch, by which it corresponds with the Internal, that carries back the Blood from the internal Parts of the Head, is able to make a quick and easy Revulsion ; especially if the Distemper takes its Rise from Blood that stagnates in the Brain, and invades a sanguine and plethorick Body. Surgery furnishes us with Bleeding, cupping about the hind-part of the Head, and the Back-bone ; Leeches applied to the Temples, and the like ; which are every where praised by the Authors. Pharmacy supplies us with Remedies of no less Note ; as violent Snuffs, *Apoplegmatisms*, or by chewing phlegm-discharging Remedies ; Emetick Wine in Glisters, or Portions ; and many more, that are able to rouse the Patient from his profound Sleep, and to stir and attenuate the Humours sticking in the Brain, and so restore the Spirits to their former Liberty : but if in Distempers of this kind there be an efficacious Remedy, it is certainly the Spirit of *Sal Armoniack*, especially if it be well rectified and clear'd, as well of its *Phlegma* as its acid, which it has borrow'd from the Sea-salt ; for then, with its most nimble Particles, the volatile Salts of the Urine and the Soot, which ought to be its Ingredients, it attenuates, discusses the morbid Cause, that overwhelms, oppresses, or obstructs the Brain, and forces it back to the Circulation ; it stirs and agitates the Spirits, it opens them the Passages that are shut ; in short, it fulfils all the Indications of this Distemper.

#### N O T E.

' In the Cure of an *Apoplexy*, Bleeding, and that copiously perform'd, is never to be neglected ; as a famous Author, the learned *Cornummius*, admonishes rightly in a peculiar Treatise about this matter ; the Clysters are to be made with *Sage*, *Marjoram*, *Betony*, *Rosemary*, wild *Marjoram*, the lesser *Centory*, the Roots of black *Hellebore*, *Briony*, *Taragon*, the Pulp of *Colocynthida*, *Senna* : To a Decoction of these, add *Hiera Colocynthidos*, *emetick Wine*, *Honey of Rosemary*, *Castor Sal gemma*, the distill'd Oyls of *Amber*, *Lavender*, &c.

Some

'Some Practitioners are afraid of giving Vomits, as if a Suffocation might follow them; but that fear is vain, tho' otherwise you may mix them with Purges; so the emetick *Tartar*, or Syrup of *Glauber*, or the *Oxy saccharum* of *Ange-lus Sala*, may be added to a purging Decoction, to make it an ambiguous Remedy, working either upward or downward, according to the Disposition of Nature; if the Patient cannot swallow a large Dose of Liquor, give him the *extractum-panchymagogum* of *Crollius*, in a little Spirit of *Cherries*.

'Volatile Salts of *Hartshorn*, *Vipers*, &c. are for several Reasons to be recommended; but few Physicians have thought of joining them with purging Medicines, which yet may safely be done, as it has often been experienced by some Physicians of *Geneva*, among whom the writer of this Observation is one, and perhaps together with another Colleague, and peculiar Friend of his, the first that tried it.

'By this the benumm'd Spirits lodg'd in the Fibres of the Stomach and Guts, are more potently excited, and as it were admonished of their Office, contract the said Fibres otherwise insensible; but now sooner perceiving the thicker points of the purging Medicines, and consequently stir and shake all the Nerves, by which the Obstructions are sometimes opened.

'The same volatile Salts in form of Powder, rouse the Patient extremely, not only being held under the Nose, but blown into it; among the distill'd Oyls to be rubb'd upon the Tongue and Pallate, they praise the true Oyl of *Cinnamon*, without any Adulteration; of Apoplectick Waters you may see abundance in the Authors; but in the attack of the Distemper they are cautiously to be used, for fear of a Rupture of the Blood-Vessels, which happens often in this case, and brings Death immediately.

'We need not add much of a *Coma*, *Caros*, and *Lethargy*; because the Cure of those Distempers is not so different from that of an *Apoplexy*; I shall only observe, that the said Distempers, especially a *Coma* and *Lethargy*, are often the Symptoms of malignant Fevers, and that they require no other Remedies than they: Therefore, if there be but the least Suspicion of a Fever, that is of the intermitting kind, or has any sensible Paroxysms, neglect not use of the *Jesuit's Bark* after the universal evacuating Remedies, in which



\* which case the said Bark may also be joined with volatile Salts.

\* The use of Tea with volatile Salts is also very proper.  
 \* See hereafter the Chapter of the *Palsy*, where you'll find  
 \* something of all the nervous Distempers in general.

## C H A P. VI.

### Of the *Catoche*, or *Catalepsis*.

**A**Mong the principal, as well as most strange Diseases they reckon also that which is call'd *Catoche*, and by another name *Catalepsis*, from *καταλαμβάνειν*, that is to be taken; because those that are attack'd by this Distemper, are taken suddenly, and remain in the same posture in which they are taken, as if they had look'd on some *Gorgon's Head*. The *Latins* call it *Congelatio*; because the Members are commonly stiff, and as it were frozen.

This Distemper is very rare, and Practitioners meet not often with it in their Life-times. *Galen* relates one only History of it, of his School-fellow that study'd too hard: *Fernelius* has two, one of some-body a writing, and the other of one that lay in the manner of a dead Body, and kept the posture that was given him. The like Histories may be seen in *Skenkius*, *Rondeletius*, *Tulpius*, *Forestus*, and other Observators; who yet in all things agree not all; because this Distemper used to take the Patients in various postures, and to keep them in the same; yet in this they all agree, That the Presence of this Distemper makes, that the Patients are taken suddenly; that they are detained in the same posture, commonly with their Eyes open and unmoved, bereft of Sense and Motion; sometimes seeing and hearing, where there is no total Abolition of the Senses; and sometimes these Senses are quite taken away, by the mightiness of the Cause, with a Rigidity of the Members, which yet is conquer'd from without; because the standers by may variously bend and move the Members as they please, the Pulse and Respiration remaining likewise intire: From this we may easily know its Nature and Definition, the *Diagnosis*, and the Difference between that, and the other Distempers of the Head; for all this is contain'd in the afore-made Description of the *Catoche*. As

As to its Causes, I am not of *Galen's* Opinion, to alledge as a Cause of this Distemper a cold and dry Temperament of the Brain, that constipates and condensates the Nerves; for a Cold, so rigorous as to congeal and condensate, is not to be found in a living Body; and likewise the Brain, as being soft and moist, cannot be so dry, without being dead, that its Nerves should be tied and remain stretch'd, in a manner capable of producing this Distemper: Nor do I like any more the congealing Spirit of *Sennertus*, nor arising from a cold Temperament, but an occult Quality, which Spirit, he says, is like that which comes from Earth-quakes, or Lightning; whose force is such, that several Histories witness, that People have been congealed and made motionless by it; for I cannot see whence this Spirit (besides that, there is no reason for admitting of it) can be derived in our Body, and how it can have such a power to congeal the Spirits and Muscles. The Hypothesis of *Sylvius* is, in my Opinion, likewise to be rejected, who fancies a Coagulation in the Animal Spirits, like unto that which is made Spirit of Wine and Urine; for such like Liquors are not to be found in our Brain nor Body: Neither do the Animal Spirits approach to the nature of Spirit of Wine, as he supposes, which is all sulphurous, but their nature is rather *Salino volatile*; besides that, the Coagulation of the Spirits supposes their Influx into the Parts being stop'd; which can't be conceived in this Distemper, because the Pulse and Respiration remain; and sometimes the Sight and Hearing, as also the motion of the Members, if made from without, or the standers by.

Some say, that the Cause of a *Catalepsis* is a consistence of the Humours and Spirits, like unto that of Jelly or Wax; from which they deduce the impotence of moving or feeling, which depends upon the Immobility of the Spirits; which Immobility and Stiffness yet may be conquer'd from without, and the Members be variously bent, by reason the Muscles are so pliable, because of the Jelly and Wax-like Consistence of the Humours and Spirits with which they are fill'd. Among many other Reasons which destroy this Opinion, one is, That in one and the same Moment, in which the *Catalepticks* are taken, the Blood and Spirits, which were volatile and thin before, cannot presently get a wax and jelly-like Consistence: Add to this, that their wax and  
jelly.

jelly-like Spirits would not easily flow into the Eyes, Ears, Heart, and the Muscles, that serve the Respiration; which yet, that it sometimes happens, is witness'd by Experience.

The only Hypothesis then, which is left us to embrace, is the Avocation of the Soul, the extarick State, or a very strong Application of it to some Object; which, because it directs and imploy's all the Spirits to, and in that one Object; or is wholly taken up with the Contemplation of it, sends no Spirits into the Parts to make Motions, nor perceives the Impressions made from without; how true this is, is witnessed by melancholy, studious, and thoughtful People, that have a very great force of Imagination; witness also the sudden Invasion of the Distemper, which can only proceed from a very strong thought, that offers, imploy's the Spirits, and hinders their usual Dispensation.

*Lastly*, This is witness'd by the Patients remaining in the same posture in which he was taken, which proceeds from a Determination of the Spirits made toward some Parts; which Determination remains, because it is not succeeded by a new one; by reason of the Soul's being imployed, unless outward Agents, and the standers by, supply the place of the Soul, and by variously bending the Members, open a passage to the Spirits, which always flow in some, tho' an insufficient quantity into other Muscles; for the Relaxation of one Muscle, is the occasion of the Contraction of its Antagonist. The Pulse and Respiration remain, because they are spontaneous Motions, not depending upon the pleasure of the Soul; and therefore they are still made, though the Soul be busy'd and imploy'd elsewhere; the Patients see, and hear, which yet happens rarely, when the Extrasy and Avocation of the Soul is not so great, as to hinder the total Flux and Reflux of the Spirits in the Eyes and Ears.

As to the Prognosis: This Distemper is not to be judg'd so dangerous as an *Apoplexy*, tho' it is not void of danger; and if it lasts long, it is to be fear'd, that Death will follow, because of the defect of the Spirits in the Parts; and consequently the defect of Nutrition, Digestion, Respiration, and the Motion of the Heart.

The Cure of this Distemper is the same with that of other sleepy Distempers in the Fit; and after that, prescribe those things that give Motion to the Blood and Spirits; for the more the Blood and Spirits are moved, the more our  
Thoughts

Thoughts are divided ; and consequently the Soul applies it self not to any one alone. Such are pretty strong Purges, and Glisters now and then exhibited ; aperient and attenuating Apozems ; as also hot Juleps and Confections, mercurial and chalybeate Medicines, volatile Spirits and Salts, aromatick Plants ; a warming and attenuating Diet, Diaphoreticks, a sudorifick Decoction, bathing, mineral Waters : In a Word, all what is proper in Melancholy, which commonly is the Father of this Distemper.

N O T E.

' The Cure of this Distemper, which is very rare, differs not much from the Cure of the sleepy Distempers, as our Author observes. *Sennertus* and *Forestus* hold Bleeding useful in this case, and not without reason ; for by this the Vessels being emptied, there is a more free Passage given to the Spirits.

C H A P. VII.

*Of the Palsy.*

**A** *Palsy* is a Privation of Sense and Motion ; not that which follows upon the Brains being stuffed up and fill'd, and injures other Functions ; for then it is an Apoplexy ; nor that in which the Members are rigid, and easily flexible in various Postures, caused by the Avocation of the Soul ; for then it would be a *Catalepsis*, as we have said before ; but that which invades the Patient, the Brain either being untouch'd, or half of it only affected ; because of the Influx of the Animal Spirits being hinder'd, by an Obstruction or Oppression of the Nerves. There are various kinds of it ; for if, the Head only excepted, it invades all the Parts under it, it is called *Paraplegia*, or the dead Palsy ; if half of the Body, from the top of the Head to the sole of the Foot, be affected, it is called *Hemiplegia*, or the Palsy of one side : If only one part, as an Arm, a Leg, the Tongue, &c. be taken with it, it is called a particular Palsy ; as the Causes are more or less grievous, so the Palsy changes its kind ; one is perfect, in which Sense and Motion are quite taken away ; the other imperfect, which might rather be



call'd a Feebleness and Numness ; in which the Sense and Motion are not totally taken away, but only diminished ; which is the way to a perfect Palsy. There is also another Species of the Palsy, viz. when the Motion is taken away, and the Feeling remains ; either because the Influx of the Spirits is too little, and only enough to cause a feeling, but not sufficient to make the Motion ; or because the stoppage of the Nerves is in the Fibrous or *Medullar*, and not in the membranous Substance, on which the Feeling depends ; or lastly, because the Surface of the Body and the Skin are not so full of those Humours that hinder the Feeling ; for from such a Cause, a Privation of Sense may proceed ; or on the other side, the Sense is lost, and the Motion remains, because of the contrary Reasons ; which may easily be deduced from what has been said.

The Causes of this Distemper are in general, all things that can hinder the Influx of the Animal Spirits, by whom no body doubts, but the Motion and Sensation are made ; which Causes, if they shew themselves in the middle part of the Brain, that is in either of the Borders, near its medullar part, and even near the Pith, they produce a Palsy on one side ; but if they stick not in the beginning of the Nerves, but descend lower under the Head, into the whole stock of Nerves, they occasion a *Paraplegia*, or dead Palsy ; but if they are only found in some Branch, or Plexus of the Nerves, that serves some particular part, then they bring a particular Palsy ; such Causes are thick Humours got in to the Nerves, and stopping the passage of the Spirits ; these Humours are either strain'd thro' the wider Glandules of the Brain, and together with the Spirits, penetrate in to the nervous Ducts ; or they are immediately contain'd, and remain in the Blood Vessels, which run, as is manifest by experience, thro' the middle Substance of the Nerves, or Sweat thro' the said Vessels, when they are too full ; and by stopping the Nerves, hinder the Passage of the Spirits.

And it is no great matter, whether these Humours are bilious, pituitous, or melancholy ; it is enough to say, that they are peccant in thickness and viscosity, and sometimes also in quantity. Narcoticks given inwardly, narcotick Vapours and Exhalations, the steam of Quick-silver, immoderate drinking of Wine, are able to bring this Distemper : because of their sulphureous Particles that tie the Spirits, and stop

stop their Motion, which being thin, commonly penetrate into the Nerves, hindering the Flux of the Spirits into the Parts, which then grow loose and flabby: From these Causes it may happen, that the wider sort of Glandules of the Brain strain not pure Animal Spirits, but such as are mix'd with gross Particles, which afterwards obstruct the Nerves. Tumours near the Nerves, the cutting off of the same, a Luxation of the *Vertebra*, the touching for a while of things that are excessive cold, as Ice; the cold Air, a wet Cloak kept long about the Neck, is used sometimes to bring the Palsy; as *Galen* says, Which way they are able to bring the Distemper of which we treat, is plain. As to the cold Temperament, or the Matter congealing the Spirits, and destroying the Temperament of the Nerves; as also the excessive Exsiccation of the nervous Canals, which *Riverius* ranks among the Causes of the Palsy, fall sufficiently of themselves, and want no Confutation.

The *Diagnosis* of this Distemper is easy; for by the Impotence of Feeling, or moving of half the Body, or one particular part, the Species of the Palsy is discovered; the place of the Obstruction or Oppression of the Nerves, is sometimes easily detected; especially, if it proceeds from an outward Cause, a Luxation of the *Vertebra*, a Blow, Contusion, Rupture, &c. But not so easily when it proceeds from an inward Cause; yet it may appear, and be known by the Anatomy of the Nerves; in a Palsy of one side half of the Brain, and of the Spinal Marrow are affected. In that of the Legs, there is an Obstruction and Stoppage about the *Os Sacrum*; if the Hands and Arms are afflicted with it, the fault lies about the latter *Vertebra* of the Neck, and the first of the Breast, as in the Example of *Galen*; and so it is with the rest: It is to be understood, that this happens most commonly; for such particular Palsies may likewise proceed from the Principle of the Nerves and the Brain.

The Signs of external Causes need not be given, as which are obvious to the Senses, or known from the Relation of the Patient, or those about him; the Internal are watery, cold, and thick Humours; the *Diagnosis* of which is had from a pituitous or melancholy Temperament, Old Age, external refrigerant Causes; a cold and gross Diet, Obstructions, an Apoplexy gone before it, which commonly turns to a Palsy, or a Palsy of one side. Here I must take notice,

that no Nutrition is made in Parts afflicted with the Palsy ; But that by degrees they grow lean and dry, because the Spirits contribute no less to the Nourishing than the Blood, as the Blood contributes no less to the Motion than the Spirits ; for these two Liquors are two inseparable Companions in all Functions, and consequently in the Nutrition ; the Spirits not only dilate by their Motion the Pores, to which the nourishing Humour is applied, but also by a sort of Fermentation which they make, and an Attenuation in the Particles appointed to Nutrition, they render them more fit for that Work.

The *Prognosis* of a Palsy ought always to be bad ; and the more Parts it takes the worse ; therefore a particular Palsy is not so dangerous as an universal one ; but they are all difficult to be cured, because of the stubbornness of the Cause, which is not easily discussed, and the Profundity and thick Substance of the Nerves, from which the Humours cannot be drawn away.

A shaking, coming upon a Palsy, is good ; a withering or coldness, coming to any afflicted part, is of a bad omen ; the Distemper is more difficult to be cured in old than in young People.

As to the Cure, since this Distemper for the greatest part proceeds from a cold thick Humour, all what attenuates this Humour, and dissolves, and consequently hot and aperient Remedies ought to be prescribed : Among the universal Remedies, Bleeding is of no use, unless in case of a *Plethora* : A Purge may be given now and then, of the *Pilula cocha minores*, the same ferid ; or a Potion of an attenuating or heating Decoction ; with Senna, Salt of Tartar, Sal Prunel, Rosin of Jalap, and some Grains of Scammony in some Conserve ; aperient and purging Apozems : Here you may prescribe likewise Chalybeat and Mercurial Medicines, a Sudorifick Decoction, Bagnio's, Fumigations ; which Fumigations must be made of Brandy or Wine, in which red-hot Bricks are thrown, and then the whole Body is to receive the Steam ; hot mineral Waters are also of wonderful effect in this Distemper, both for outward and inward use ; Vomits likewise, because they stir the Humours, and make a potent Revulsion, may be used in a Palsy ; and consequently emetick Wine, and other emetick Preparations of Antimony ; spirituous Waters are proper also ; the heavenly, im-

perial,

perial, Cinnamon-waters ; and that which is call'd Antiparalytick, and prescribed in *Riverius* : Nor are volatile Spirits and Salts of less use, nor fix'd and lixivious, aromatick and sharp Salts, aperient Herbs and Roots. As for outward Applications, a Fomentation of Hungary-water, Brandy, or a Decoction of hot Herbs and Roots ; as also hard rubbing are convenient ; Liniments and Plaisters are not so much approved of ; Sweat may be likewise promoted in the part affected, or the whole Body ; with a Decoction of the great Bur, in form of a Fumigation ; or of Dwarf-elder, which works more potently ; or let the Patient be put in a Tub with Rape, or Wine-lees, as soon as the Wine is drawn off, and let him stay there for a while : The *Chymists* recommend *Elixir proprietatis*, the Spirit of Tartar, inwardly taken : When a Palsy proceeds from a cutting off of the Nerves, it is incurable ; and likewise very difficult in a Luxation ; but when it comes from other external Causes, Colds, Contusions, &c. it is to be cured with the aforesaid Remedies, insisting chiefly upon outward Applications, and others prescribed by the Authors.

#### N O T E.

\* That a Palsy is sometimes occasion'd by external Cold is manifest from Experience ; and this made the Ancients think, That there was something analogous to external Cold in the Body, to which the Palsy, proceeding from an internal Cause, owed its origin ; and the *Pituita* being their cold Humour, they thought, that the Palsy was to be ascribed to no other ; the rather, because the *Pituita* is not only cold, but also viscous, and glewish, and consequently very apt to breed Obstructions ; and because the Brain, which according to *Hypocr.* is the Metropolis of the *Pituita*, gives Birth to the Nerves, which are the Authors of Sense and Motion, they believed, that this Humour could with the greater ease flow into the Orifices of the Nerves.

\* To this Opinion of the Ancients, our Author seems to incline ; when to the thickness and viscosity of the Humours, whatever they be, he chiefly imputes the Obstruction of the Nerves that constitutes the Palsy ; but what he adds a little after, of the sulphureous Particles binding the Spirits, shews, That there is another quite different Cause of this Distemper, which he admits of, but explains it not, as he ought to have done.



Sylvius was of Opinion, That the Gall it self, whose Nature is Sulphureo-saline, sometimes became Narcotick, and had effects not unlike Opium, with which it agrees in many things, and this he accused not as the least Cause in the Production of Sleepy Distempers. I my self have seen several Women, as well as Men, of a bilious melancholy Temperament, of a dry and skinny Constitution, with long Necks that were troubled with Coma's, Carus's, Apoplexies and Palsies: Nay, I have observed, That these are more subject to those Distempers, than fat or phlegmatick People; tho' I deny not, but that the latter likewise are snatch'd away by those sudden and dispatching Distempers; but this I would rather attribute to a universal Plethora, or a copiousness and superfluity of the Blood, and other Humours unfit for Circulation; as also to the straitness of the Vessels squeez'd from all sides; and these Cases I would place in the Class of suffocating Catarrhs.

If any one thinks, that the Phlegm contributes to this, he must not mind its thickness and viscidiry so much as the Salts, that are lodg'd in that viscons gluish Humour, which Salts may be rank'd among the Acids, as is proved by that Palsy which is so familiar to the Inhabitants of *Austria* and *Moravia*, of which the Learned *Etmuller* speaks, and which he observes to proceed from their very sharp Wine, which they drink excessively. The Palsy, or Weakness that succeeds on what is call'd the *Colica pictonum*, confirms likewise this Opinion; for the latter of these Distempers seems only to proceed from a Transposition, or lying down of the Matter, that caus'd the first on the Spinal Marrow; and that this Matter is to be imputed to an acid Salt, is proved by the extraordinary sharp Pains of the Cholick: But if it be objected, That in the Palsy the Feeling is taken away, as well as the Motion, which it would not, if an acid Salt did predominate: It may be answer'd, That perhaps the Acid works upon the Membranes and the Tunicks of the Nerves one way, and on their Marrow another: That whilst it pricks and frizles the former, it produces Pain; and when it is got into the latter, it only precipitates the Spirits, and keeps them under, which causes the defect of Sense and Motion: Add to this, That there are likewise painful Palsies, in which the Patients by Intervals feel Pain the affected Parts, which is to be imputed to the  
Acid,

Acid, that melts and moistens now and then the Tunicks of the Nerves.

What if we should say, That this Salt that congeals the Spirits is nitrous, or analogous to Nitre? This Opinion is confirmed, by that we daily see Liquors artificially congealed by the help of Nitre; and that the Cold it self, which is an evident or external Cause of the Pally, may well be adscribed to the fix'd and stiff Nitro-aereous Particles, that are dispersed in the Atmosphere: And hence the reason is evident, why Apoplexies, which are nothing else but universal Palsies, are more frequent in the Winter than the Summer; for that reason, the Air is loaden with abundance of thick and nitrous Particles; by which being received within us, by the Respiration, and thro' the Pores of the Skin, the Motion of the Humours, the nervous Juice, and the Spirits themselves, is made slower; and at last either partly or wholly taken away: But let it suffice, only to have touch'd this Matter.

As to that Species of Pally, by the Indians call'd *Beriberi*, of which *Bontius* speaks, tho' *Etmuller* imputes it only to the Humidity of the Air, that moistens the Nerves and Tendons: I see no reason here, why we may not likewise accuse here a fixing Salt. *Erasistratus* long ago has observed the like Pally, which he calls *Paradoxon*; in which he says in *Celius Aurelianus*; the Patients walking are stopt suddenly, and after a little while, it suffers them again to go on: Of this kind of Pally I have seen one or two Examples in these Parts.

The Pally is cured first by Bleeding, then sharp Glisters, to which Turpentine is added, afterwards by repeated Purges, lastly by Decoctions of *Guajacum*, *Sarsaparil*, and the like; in which Purgatives may commodiously be infused, and to which volatile Medicines may be added. The Grease of Cats, Foxes, Geese, Storks, &c. is proper here; of these with Aromatick Oils, and chiefly with Castor, very useful Balsams are made. In a Pally of the Tongue, the Juice of Sage kept in the Mouth is recommended: This I cured once in a young Man by large Bleeding, sudorifick Decoctions, Mithridate, Castor, and Purges often repeated. Of Baths and Medicinal Waters, which here are called the last Refuge, our Author has said enough.

## C H A P. VIII.

*Of Convulsions and an Epilepsy.*

**BOTH** these Distempers we treat of in this Chapter, because there is a very great Affinity between them, not only in Consideration of the part affected, the Muscles, but also in regard of the Cause, which, as we shall see lower, is the same in both; and of the Cure, which most always ought to be the same in Convulsions and an Epilepsy. A Convulsion is a preternatural, lasting, and involuntary Contraction of the Muscles with Pain, by which the Members, or Parts, are variously bent, extended, and wrested to one part or other; from which state they are not removed, before the morbidick Cause is discuss'd or expelled from the Muscles in which it was lodged, or alterated by Remedies. The Ancients thought, that this Distemper belong'd to the Nerves; but because they are but mere Canals, that convey the Animal Spirits, and not capable of Contraction and Relaxation, as being no Organs of Motion; the Flexion, Extension, and other sires and postures of the Parts, seem rather to belong to the Muscles, that are the Authors of them; nay, properly speaking, the Convulsion, which as we have hinted before, is an involuntary and lasting Retraction of the Muscles of the Parts, must only be imputed to those Muscles that are subject to our Will; and that are used to make the Motions, which are call'd spontaneous; for other Muscles, or muscular Fibres, that perform the Motions, which are call'd natural, that are not subject to our Will, as are the Motions of the Guts, Heart and Stomach, are never, properly speaking, troubled with Convulsions, or Cramps; but only with Convulsive and *Spasmodick* Motions, which differ from Convulsions, as we shall see lower; because these Motions are mix'd, and the Parts are now contracted, and then relaxed, which happens not in a Cramp and Convulsion; where the Body, or a Member is immovable, and drawn always toward one part: But that the Parts, which perform the natural, and not spontaneous Motions, are only infested with Convulsive Motions; besides that it is manifest by Experience, by which it is constant, that

that the Stomach and Guts make but intermittent Contractions in vomiting and purging, is proved also by Reason; for as much as the muscular Fibres, that are about the Stomach and Guts, are not strong enough; nor have ever a sufficient quantity of Spirits, and *Spasmodick* Matter, to hold out and maintain long that very great force, which is required to the convulsive Contraction of the Stomach, as we have said of Vomiting; especially since the Guts and Stomach have always been uled to a Relaxation; or at most, but to a slight Contraction, which cannot be said of other Parts that are properly call'd, subject to Convulsions; such as are contracted by, and extracted from the Brain, and have stronger Muscles; for as much as all their Fibres are join'd in one Muscle, and end in one Tendon, and consequently are stronger; to which also helps the particular structure of the Parts, which may have place in the Heart; by what we have said of the *Syncope* of the Heart, or *Swounding*.

A Convulsion is divided in universal, in which not all the Muscles of the Body are preternaturally contracted, and pull the Parts to which they are annexed, because that cannot be; but only a great many, that are dispersed throughout the Body; and in particular, in which only one Member or Part is continually, and involuntarily pull'd by a preternatural Contraction of the Muscle that moves it.

The first sort of Convulsion the Authors divide in three Kinds: The one call'd *Emprostotonos*, in which the Head, Neck and Arms, are violently drawn forward: The other, which is opposite to that, is call'd *d'Opistotonos*; and in this the same Parts, especially the Head, Neck and Arms, are pull'd backward: The third Species is call'd *Tetanos*, or the Tonick Motion; in which the Parts remain stiff, between a Flexion and an Extension, or as it were in an *Equilibrium*, between two opposite Motions; because of the equal Contraction of the Antagonist Muscles. The two first Kinds are possible, tho' they cannot easily be conceived; but the latter, or the *Tetanos*, is not to be imagined; for it is impossible from Anatomy, that two Antagonist Muscles should be contracted together; because the Relaxation of the one, is the occasion of the Contraction of the other; for a Muscle being cut off, or taken with a Palsy, its Antagonist presently keeps the Part drawn toward it; therefore with the more Judicious we must either say, that there is not such a Spe-



cies of a Convulsion ; or that it is to be understood of that site of the Body in which the Joints are strait, and not crookedly placed, *viz.* by a Convulsion of the Muscles *extensores* : Of the particular Convulsion there are many Species, which have various Names, as the Parts affected vary ; for in the Muscles of the Eye it is call'd *Strabismus*, in the Muscles of Mandibles *Trismus*, in the Muscles of the Mouth *Spasmus Cynicus*.

For the Causes of a Convulsion, we need not fly with the Ancients to the *Munition* and *Repletion*, upon which only they thought a Convulsion depended ; which Opinion they confirmed with an Example of Cords, which are contracted and shrink for two Reasons ; either when they are wetted, or when the moisture being too much evaporated, they are emptied, and grow dry ; for this Hypothesis, besides that it cannot satisfy a lover of Truth, supposes that the Contraction and Convulsion is made by the Nerves, which every one that understands Anatomy knows, is made by the Muscles only ; and that the Parts of the Body grow dry, and are so excicated, that it should cause a Contraction of the Members ; which dryness yet no body believes that happens to the Muscles ; and hence arises a great difficulty among the Ancients, which is not to be solved, that is, Why that Humour which makes the Repletion in the Nerve, and consequently the Convulsion in their Opinion, brings not the Palsy ; to explain which *Phænomenon* many have labour'd in vain ; others, not able to solve it, have dissented from *Hippocrates* and *Galen* ; as to the Inflammation of the beginning of the Nerves, by reason of which they are extended and contracted, which *Galen* alledges as a cause of a Convulsion from Repletion, falls down enough of it self, not to need any Confutation.

Therefore more likely Causes of a Convulsion, and that are more satisfactory, are to be alledged ; and these are no other, but what are used to perform the Motion of the Parts in the natural State, *viz.* the Expansion, Fermentation, and *Explosion* of the Spirits, in the fleshy Fibres of the Muscles ; by which those Fibres, as being widen'd and swell'd, are shorten'd, and so abbreviate the Muscle which they compose, and pull the part to which it is fasten'd ; yet with this difference, That that *Explosion* and Fermentation in a Convulsion, which is the preternatural State, is much more violent and lasting, and cannot be interrupted, and perform'd  
sion,

again at the Soul's Pleasure, as it is in the natural Motion. But if it be asked what that Matter is that expands the Spirits in the muscular Fibres, and raises them to a fermentative Motion, as well in the natural as preternatural State? or rather, how the muscular Fibres that compose the Muscle are dilated? It shall be answered, That in both Cases it proceeds from the same Cause; tho' in a Convulsion it is more intense and stronger, than in a natural Motion; and this Cause is the Animal Spirits, which as long as it continues in a certain degree of Motion, is very well ruled by the Soul, and sent to the Parts; in which it always sufficiently flows, to cause a Sensation, and perform the Nutrition, more copiously when there is occasion to make Motions; but when it forsakes this moderate and natural Motion, and is disorderly and violently moved in the Nerves and Muscles; because of the *heterogeneous* Parts that are mix'd with it, either strain'd with it thro' the wider sort of Glandules of the Brain, or come to it from the Blood, that is out of order; then it cannot be ruled by the Soul, but raises and keeps a disorderly and violent Motion in the Belly of the Muscle, till the *heterogeneous* Parts are dissolved or altered; or no longer administered from the Brain, or Mass of Blood; for that the Blood furnishes a Matter which commonly raises a Tumult in the Spirits, cannot be denied; for it contributes to the Motion in the natural State, no less than the Animal Spirits; for as much as it yields a certain tie, or a Matter, which *Willis* calls *Elastick* and *Explosive*, and which I think is nitrous, drawn from the Air, and consequently acid, and of a contrary Nature with the *Salino volatile* Spirits: If then that Matter has its contrariety, which it naturally should have to make the moderate Fermentation of the Spirits, and the natural Motion of the Muscle: If, I say, it has that contrariety of Nature, augmented by an ill mixture and fault of the Blood, or an acid that is predominant in it, which most commonly is the cause of Convulsions, and convulsive Motions; then of necessity the natural Motion must be turn'd into a convulsive and preternatural one, by reason of the excessive Expansion and Fermentation of the Spirits in the Muscle, which cannot easily be restrain'd, even not by the Command of the Soul; and as this Matter is lodged in one or other, or several Muscles, so it commonly produces particular or universal Convulsions.

Besides,

Besides the said nearest Cause of a Convulsion, some alledge another, *viz.* the Irritation of the nervous and membranous Parts, which they would have make a Convulsion, because of the Motion which it procures the Spirits ; but certainly an Irritation can make no Convulsion of it self, if there comes not to it an Expansion of the Spirits from their mixture with the elastick helping Force, or else there would be Convulsions in all cholick, arthritick, and rheumatick Pains, where the Pains are violent, and consequently the Irritations no less, which yet most commonly happens not ; and therefore, if an Irritation of the Nerves sometimes causes a Convulsion, it is but occasionally, not efficiently, and only for as much as it stirs the Spirits more, and deduces the *heterogeneous* Matter to Action ; whence their more intimate mixture, and consequently a greater *Explosion* proceed ; add that an Irritation commonly, and most always produces convulsive Motions only, and not what is properly call'd a Convulsion.

The external and procatartick Causes of a Convulsion, are all those things that are apt to furnish the Spirits with a very *heterogeneous* Matter, and spoil the Blood in such a manner, that the elastick Matter which it yields, is either too strong or too copious ; or that the Matter, requisite for the Generation of the Spirits which it administers, is not simple and pure ; but mix'd with *heterogeneous* Particles : Such are Poysons, white Hellebore, violent Medicines, Watchings, immoderate Evacuations, the excessive use of Venery, &c. fetch'd from the six unnatural things ; as also malignant, burning, and consumptive Fevers, which produce Convulsions, and convulsive Motions ; because the Contexture of the Blood and Spirits is vitiated.

The Diagnosis of a Convulsion may be sufficiently drawn from what has been said, whether it be universal or particular ; as also the difference between that and convulsive Motions.

As to the Prognosis, a Convulsion is never without danger, which is to be judg'd greater or lesser, the more or fewer Parts it invades, and the more or less noble they are : That which proceeds from a malignant Distemper, or is much augmented by immoderate Evacuations, comes from Poyson taken, the bite of a venomous Animal, or the Puncture of a Nerve, and other grievous Causes, is always of a very bad Omen. Concerning the Cure of a Convulsion, besides

besides the Remedies that are due to the Causes that produced it ; as Poison taken, the bite of a venomous Animal, immoderate Evacuations, excessive Venery, &c. or a pestilential or burning Fever, and other acute Distempers ; which Remedies have been already proposed, when we treated of Swooning ; it requires those things that are apt to evacuate, and eradicate the *heterogeneous* Matter, and to restrain the Motion of the Animal Spirits ; such among the universal Medicines are strong Glsters, cathartick Pills and Potions ; bleeding likewise, if there be no Indication to the contrary, is able to procure rest to the Spirits. What belongs to particular Medicines, some Grains of Castor, and its Tincture, are much recommended ; as also the Water of Leeches, Laudanum, and narcotick Syrups often administered ; the cold and sulphureous Bath, a sudorifick Decoction, if there be no Indication to the contrary ; Alkalies and Aperitives are likewise proper sometimes, because the Acid Particles in the Blood abound most commonly with very heterogeneous Spirits : In a Word, make use of all those things, which we shall lower recommend in the Cure of an Epilepsy.

The several outward Applications, which *Renerius* prescribes, as Anointings with Oyls, Plaisters, Cataplasms, &c. seem not to be of great use ; for his ordinary Drink the Patient may use Mead, or a Drink made with Guaiacum and Peony.

## C H A P. IX.

### *Of an Epilepsy.*

**T**HE Muscles are not only used to be troubled with what is properly call'd a Convulsion ; that is, a lasting Contraction perpetually taking away the Motion ; but they may also be afflicted with another Distemper, depraving the Motion of the Parts ; in which, because the Members and Parts remain not continually contracted, as we have said of the Convulsion, but are sometimes contracted, and sometimes extended, that is, with Intermision, and by Fits agitated ; it is not, properly speaking, call'd a Convulsion, but a convulsive Motion : This is either particular, when it only invades some particular Member or Muscle ; or universal, when  
most



most all the Parts of the Body are variously agitated : There is a third sort, in which the internal Parts suffer convulsive Motions, viz. the Guts, the Stomach, the Womb, the Lungs, the Midriff, the Esophagus, the Larynx ; as in the hypochondriack and hysteric Passions : In a fourth sort, the external Parts and Joynts only are convulsively moved : It is also either primary or essential, when it begins of it self without another Distemper that produces it ; or secondary or symptomatick, when it proceeds from another Distemper ; such are the convulsive Motions that are observed in malignant and pestilent Fevers, the Small-pox, and other acute Distempers : It is also divided in Idiopathick, when it depends on the Brain, which is the proper Seat of the Spirits ; and Sympathick, when it comes from an Infection, communicated to the Spirits from the Blood, or other Parts. To run through all these several Sorts would be useless, because one being known, the Nature and Cure of the rest is easily detected ; for they neither have different Causes, nor are made different ways ; therefore we shall only treat here, of that convulsive Motion which is, as it were, the first and chief of all the rest, and invades all, or at least, most Muscles of the Body : I mean the Epilepsy, which is call'd also the Falling-Sickness, the comitial and herculean Disease, &c. it may be defined to be a Distemper, in which, with the loss of the use of the Soul and Senses during the Paroxysm, there are all the Body over, that is, in the Joynts, Eyes, Jaws, Breast, &c. convulsive Motions, shaking all those Parts with a disorderly Motion, with Froth at the Mouth ; especially toward the latter-end of the Paroxysm ; and sometimes a voiding of the Excrements and Urine, may Sperm, if the Paroxysm be violent : This Distemper sometimes is hereditary, and translated from the Fathers to the Sons ; and sometimes acquired, that is, not proceeding from an hereditary Disposition ; yet it is always used to return by Fits, in the manner of intermittent Fevers ; which Fits sometimes return sooner, sometimes later, and last either longer or shorter, according to the force, quantity, and obstinacy of the morbidick Matter : Out of the Fit the Patients are very well, but when that attacks them, they fall down to the Ground, or throw themselves on the Bed ; if, as sometimes it happens, they feel it coming, there losing the use of Reason, and bereft of Senses, they variously agitate, and move the Parts of the Body, as

is said before. It must be noted, That in that Definition of an Epilepsy which now we have given, we only describe that which is the most violent of all; for there are other Epileptick Distempers, where only the Head, an Arm, a Thigh, or half the Body, are shook with Convulsions; the Mind and Senses remaining untouch'd, or at least their use not taken quite away: There are likewise other convulsive Fits, where the Mind is not totally affected, and the inward Parts only suffer.

The Internal, and nearest Cause of an Epilepsy is not, as the Ancients thought, an Obstruction and Repletion of the Brain and its Ventricles, that is imperfect, and by halves; which Opinion we need not confute, since it falls enough of it self: Nor is it the Irritation of the Nerves; for, as we said before, it only occasionally produces Convulsions, but a disorderly expansive Motion of the Spirits, not only in the whole Substance of the Brain, the Spinal Marrow, but also in the Nerves and Muscles; which lasts not in the Muscles, as we have said of the Convulsion, but is made by Intermission, because of the unequal Supplies of the heterogeneous Parts, or the elastick assistance of the Blood, and the influx of the Spirits; or because that Matter which creates that fermentative and disorderly Motion of the Spirits in the fleshy Fibres of the Muscles, is soon expelled and dissipated; wherefore it stands in need of the influx of new.

All the External and Procatartick, as well as internal, efficient, and occasional Causes in the Head, which we acknowledged for the Convulsion, have also place here; for there is a great Affinity between a Convulsion and convulsive Motions; and therefore it is no wonder if they are produced by the same Causes; yet this difference is between both the Distempers, that besides the weak and loose Constitution of the Brain, which is so common to Epileptick Patients, the quantity of the morbidick Matter is much greater in this, whilst the Paroxysm lasts, and gathered in a heap is only set to work at certain times; for the heterogeneous Parts that are mix'd with the Spirits, are dispatch'd by the convulsive and epileptick Motions themselves; or at least they are so alter'd, that it requires some time before they are heap'd up again sufficiently, to make a new Paroxysm.

If it be asked, What Constitution of the Blood it is in the Epilepsy, that makes them subject to this Distemper? for  
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the Blood in this Disease is always in fault: I answer, That it inclines to an Acid, which is able to bring convulsive Motions, as the hypochondriack and hysteric Passion, and the *Salino-volatile* Nature of the Spirits can witness; the truth of which is proved by the specifick Remedies, which are all Alkalies; and the greatest part of Epilepticks, that are of a melancholy Temperament, and consequently that Humour superfluously abounds in them; wherefore *Hypocrates* says, melancholy People become Epileptick, and the reverse.

As for the Diagnosis of this Disease, an imminent Epilepsy is foreseen by a disturbance of the Mind, a heaviness of the Head, the Head-ach, a Verrigo, Watchings, turbulent Dreams, a dulness of the Mind, Fear, an heaviness of the Joynts, tremblings of the Members, a stupidity of the Senses, sparkling before the Eyes, or little Mists and Flashes of Light before the same, a ringing in the Ears, gaping, a Palpitation of the Heart, a squeezing of the Breast, Sickness, the Stomach-ach, and many more, which are not all observed in all Patients; but the presence of it is manifest, by the flinging and Agitation of the Arms, Hands, Jaws, Breast, Eyes, the disorder of the Soul and Senses, gnashing of the Teeth, the Froth in the Mouth, the voiding of Sperm, Urine and Ordure.

The Signs of the Causes are the same with those in a Convulsion, which it would be useless to repeat; but whether it be Idiopathick or Sympathick, and derived from other Parts, shall be manifest by the Symptoms that shew themselves first; either in the Brain, or other Parts.

As to the Prognosis, this Distemper is very obstinate, and if it be hereditary, or become habitual, incurable; it seldom kills the Patients, unless they be Infants, old People, or very weak, and the Fits be very violent: That Epilepsy which is not hereditary, nor confirm'd, may receive a Cure; it is also cured sometimes before the Patients are 14 or 15 Years old; but afterwards it admits of no Cure.

The Cure of an Epilepsy is two fold; the one is in, and the other is out of the Fit. Physicians are seldom call'd to Cure the Paroxysm, unless it be the first, or very strong and violent: In these Cases, the Patient is sometimes to be rouzed, and the morbidick Matter to be drawn from the Brain; by prescribing all those things which we recommended in sleepy Distempers, which we need not repeat here; or also  
Narcoticks,

Narcoticks, and Laudanum, narcotick Syrups, Campher, Castor, &c. when the Fit is gone, to correct the acid Constitution of the Blood, and expell the heterogeneous Matter, make use of aperient and attenuating Apozems. and the Purges so often recommended, a sudorifick Decoction ; all Alkalies, volatile and fix'd Salts, spirituous and sulphureous Liquors, Purges of Pills, with Extract of black Hellebore, or Potions ; nay, antimonial Vomits exhibited sometimes, Hellebore-wine, Chalybeats, mercurial Remedies, hot and cold mineral Waters are call'd Specificks, Salt of Vitriol the Root, and Seed of Male Peony, Lime Flowers, Mistleto, the Catstails, or Carkins, that come before the Hazel-nuts ; the Root of wild Valerian, *Magisteria*, Man's Skull, Crab's Eyes, Powder of Coral and Pearl, Cinnaber of Antimony, or natural ; Oyl of Hazel-wood, &c. Among the Compositions, there are various distill'd Waters that are call'd *Epileptick*, to be found in *Schroderus*, and others ; as also the Elixirs, and Mixtures prescribed by the same Authors ; likewise the Powder of *Gutteta*, called Marshal's Powder, &c. Outward Applications are of no-Virtue, unless it be a Seton, or a Caustick ; especially in Children, not to neglect strong and sharp Glisters, if required.

## N O T E.

‘ Among the evacuating Remedies that are necessary, in the beginning of the Cure of an *Epilepsy*, you may, after Bleeding, exhibit *Mercurius Vita*, to 3, 4, 5, or more Grains, according to the Age and Strength of the Patients, with 15 Grains or a Scruple of the Extract *Panchymagogum*, or the *Pilule Cochiae minor* : *Mercurius dulcis* rubb'd upon a Stone with a little *Mercurius Vita*, is likewise of use. But as to Emeticks and strong Purges. it is to be noted, That they ought not to be continued long, for fear that the Humour that causes the *Epilepsy*, or the Spirits themselves that are wild enough already, and put into a Rage upon the least occasion, might be too much agitated ; nay, it is very proper to mix anodine Remedies with Catharticks ; as Laudanum, either by it self, or joyn'd with alkalick Specificks given at Bed-time. Even very strong Glisters are to be used but seldom, but the Body is to be kept open by gentle Laxatives, as the Pulp of Cassia in Veal broth, which Remedy may likewise be taken at



the Mouth. If the Courses be stopt, bleed in the Ankle ; if the Piles run not after their usual manner, or the little Swellings appear near the Fundament, apply Leeches.

Thousands of Specificks are recommended in this Disease ; but what is to be lamented, the greatest part are used without Success : Among the mercurial Remedies, the Cinnabars, both Native and Antimonial, which are call'd the Load-stone of the *Epilepsy*, are praised very much. *Paracelsus* recommends the Anodine Sulphur of Vitriol ; as also other Preparations of the same. Among the volatile Remedies, the Spirit and Salt of humane Blood, Hartshorn, Amber, well clear'd of its ferid Oil, are of great use ; either by themselves, or joyn'd to fix'd Alkalies, of which there are abundance : The same may be said of the succinated Liquor of Hartshorn, the Water of Hartshorn, and other compound Waters. Peacock's Dung, and the Water or Spirit still'd from it, is call'd a Secret ; and so is Cochenil, some Grains of it being given in a proper Water : Castor likewise is not to be forgot here.

Of Amulets I shall say nothing ; they may be tried without danger by those that fancy them. As to external Remedies, besides Burning and Setons, in that kind of *Epilepsy*, where Vapours rising from some part, are the Forerunners of the Paroxysm ; Blisters applied to that part are proper. Concerning Diet, it is to be observed, that the Patients must wholly abstain from Wine and Venery.

## CHAP. X.

### *Of a Vertigo, or Swimming in the Head.*

THE Disorders of the Animal Spirits, or the preternatural Motions of them are various ; and as they shew themselves in various parts of the Body, so they produce likewise various Distempers ; as Convulsions, Phrenies, a Delirium, Madness, Melancholy, Hypochondriack, the histerick Passion, and likewise a *Vertigo*, of which we are to treat in this Chapter. A *Vertigo*, which by Ancients is call'd a Swimming, or a Giddiness in the Head, is a Distemper chiefly belonging to the Cavities of the Eyes, and the optick Nerves ; in which the Objects seem to turn round,  
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joyn'd with a wavering, and staggering of the Body ; the reason yet remaining intire, and no ways affected.

The Authors make two sorts of Differences in it ; the one is only a Distinction of the Degrees, that is according to the greater or lesser Violence of the morbidick Cause : The other Distinction is between one kind, where, tho' the Sight is depraved, by representing those Objects turning round, which are really at rest and not moved, yet it is not diminished, that is, no darkness comes to the Eyes ; and this is in *Latin* simply call'd *Vertigo*, *Nivos* in *Greek* ; and another, which properly is call'd *Scotoma*, where the Sight is diminished, as well as depraved ; that is, together with the Representation of the Object's turning round, there comes likewise a darkness and mist before the Eyes, as if it were a Shadow, Smoke, or Clouds.

It is not difficult to find out the immediate and nearest Cause of this Distemper, if we mind but the Symptoms it usually has ; and chiefly concerning the Sight, which in this Distemper is properly affected : From whence it is easy to judge, That the Seat of the Distemper, as we said before, is in the Cavities of the Eyes, and optick Nerves, which are the chief Parts contributing to the Perception of visible Things ; and that there is no sign of the Eyes being affected any other way : But that which immediately disturbs the Function and Passage of these Parts is nothing else, but an immoderate and preternatural Motion, and a disorder of the Animal Spirits ; which makes that, when the Fibres of the optick Nerve are successively struck, (for the Sight is made last in that, (there results no other Perception from it, than which the Patient would have, if the Objects about him were really turn'd round ; for in that case various Fibres of the *Retina*, because of the various Proportions of the Objects are moved ; and consequently the Motions, or that Regress of the Animal Spirits would be propagated to the diverse Parts of the optick Nerves ; and represent the Objects successively visible in several Places, that, is turning round.

The Causes that use to make this Agitation and Disturbance of the Spirits in the optick Cavities and Nerves, are of two sorts ; internal, and external or procatartick ; a *Vertigo* is produced from within, when the heterogeneous Particles administred by the Blood, which is more or less

vitiated, are accumulated in the Brain, not all over it; for then, because of the disorder given to all the Spirits of the Brain, it would occasion a Delirium; but only in that part of the Brain which is taken up by the optick Nerves; and that because of a peculiar Disposition of that part, fit for the gathering of these heterogeneous Particles; for Humours gather more in these than other Parts; because of their loose commonly Structure, and other Disposition, of what Matter those Particles consist: That, because of their *Heterogeneity*, so violently move the Spirits, may be gathered, from what has been said about Convulsions, and convulsive Motions.

The external and procatactick Causes are many; as the Motion of Ships, looking down from a high Place, or on swift Water-falls, the turning round of the Body, or looking long on Wheels, or other things that turn round; all which immoderately move the Spirits that lodge in the optick Nerves; either because of the copious Rays, or because they agitate the various Fibres of the *Retina* too hard; which Motion, because it is often renewed, at last is communicated to the inside of the Brain, and cannot easily be restrained afterwards; to which Work most commonly concur the heterogeneous Particles, that always skulk in the Blood, and by such a Motion are set to work; the same may be occasioned by a Blow on the Head, a Depression of the Skull, because of the violent Motion communicated to the Spirits; the heat of the Sun for the same reason; Wine, Brandy, and strong Liquors taken in quantity, bad Food, Poysons that are violent, because they furnish the Blood with heterogeneous, or very nimble Particles.

The helping Causes are a foul Constitution, immoderate Exercise, Evacuations suppress'd, Anger, Watchings, Fasting, &c. because all these things heat the Body, and agitate the Spirits. From what has been said, abundance may be deduced; as first, Why a Darkness comes sometimes before their Eyes, and sometimes not: This proceeds from the greater or lesser Disturbance of the Spirits. Also, Why the reason is not affected in this Distemper; which is, because the Spirits are not touch'd in general, but only a parcel of them chiefly belonging to the Sight are affected: In the mean time, the Soul may use the rest, to reason how to correct this Fallacy of Perception: Hence may be also inferr'd, Why the Patients stagger, and sometimes fall to the Ground,

Ground, unless they lean upon, or take hold of something near them; this depends upon the disturbed Motion of the Spirits in the Brain, by reason of which they cannot flow directly into the Muscles and Joynts; because the Spirits only appointed to the Sight, and not the Motions of the Members suffer the disorder; and because moreover, the Patients, whilst they lean or lye on any thing, can perform the strong Motions of the Joynts; but it proceeds more from the false Representation of the Objects, and the place that turn round, by reason of which, by the mechanical Constitution of the Body; which Reason cannot always conquer, the very same happens to the Patients, as if really the Room, in which they are, was turning round; in which case, because of the Agitation of the Place, on which he stands, the Patient would not be able to contain himself.

Some divide the *Vertigo* in Idiopathick and Sympathick; the first proceeding from a fault of the Brain; the second from a fault of other Parts: But this Distinction seems to be of no great Moment; because, to produce this Distemper, the fault must always shew it self in the Brain and optick Nerves; therefore it is better to divide it in Primary, or Essential, that begins of it self, the morbidick Matter being gather'd in the Brain; and Symptomatick or Secondary, which in consequence of other Distempers, as Fevers of various sorts, Head-ach, the Suppression of the *Menstrua*, the hypocondriack Melancholy, &c. is excited by the fault of the Blood, or other Parts, which is communicated to the Spirits that lodge in the optick Nerves.

The Diagnosis, as well of the Distemper as the part affected, and internal and extenal Causes may very easily be had from what has been said, or the Relaxation of the Patients, or those about them; so that we need not here to propose it.

As for the Prognosis, if it be newly come, and brought by external Causes, it is slighter, and easier to be cured, than when it is inveterate, hereditary, and proceeding from internal Causes. In old Men it is more dangerous than in young; because of the Debility of the Brain: Also when it comes with a darkness, and the Patient falls presently to the Ground; by reason of the greater violence of the Cause it is of more danger. When the *Vertigo* proceeds from a disorderly Motion of the Spirits, the Cure ought to be not un-



like that of an Epilepsy or Convulsion : But, because a *Vertigo* is slighter, it requires not such great Preparations ; prescribe therefore sharp Glisters, Bleeding, antimonial Vomits, if there be Strength, as *Mercurius Vite*, antimonial Wine, the Liver of Antimony ; now and then a Purge ; attenuating, and somewhat heating Apozems, Sudorificks, Narcotics often given, Bathing, mineral Waters : In a word, all those things which we have prescribed in the Cure of the Epilepsy. A Caustick applied to the back-part of the Head prevents this, and many other Distempers of the Head ; some believe, that Conserve of Mary-gold Flowers is a Specifick in this Distemper.

### N O T E.

‘ In a *Vertigo*, after Bleeding in the Arm, or the Ankle, or both, perform’d successively, give a gentle Purge of the Infusion of Senna and Rhubarb, with the Pulp of Cassia, unless you would rather begin with a slight Emetick ; Then, after Bathing and repeated Purging, apply Leeches to the Fundament, not forgetting in the mean time the specifick Powders and Waters prescribed in the Epilepsy. The Peacock’s Dung, of which we spoke there, is also proper here ; as likewise Cauterizing upon the Skin. Great Care must be taken of the Diet ; the Stomach, which here is often in fault, must be well look’d after : Wine is to be allowed to some, and denied to others, or to be mix’d with abundance of Water ; martial Remedies are of great use in strengthening Opiats or Lozenges. Among the Aromatics, the lesser Cardamum and Long-Pepper are recommended : Keep the Body open by the use of the Pills *de succino Cratonii*, sometimes to be quicken’d with a little Scammony ; otherwise, throughout the Distemper, you must abstain from all, what is properly call’d Purging, and from strong Glisters.

## C H A P. XI.

### Of a Tremor, or Shaking.

**A**Mong the Distempers proceeding from a disorderly Motion, Defect, and Scarcity of the Animal Spirits, is also placed another Disease, which by the *Latini* may be call’d

call'd *Tremor*, and *τρεμου* by the *Greeks* : It may be said to be a depraved Motion of the Parts, in which the Joynts and Members are successively lifted up and depress'd, or bent and extended by turns : It is call'd a depraved Motion ; because it is not made as it ought to be ; and tho' some, even *Galen* himself, place the *Tremor*, or shaking, among the Motions, that are diminished by reason of the debility of the Faculty ; for if we regard simply the Motion it self of the part that is troubled with this shaking, it must be call'd a depraved, and not a diminished Motion of the Parts ; for what Motion is diminish'd makes not the Parts shake, but move languidly and slowly : That is, it consists in a less and weaker Contraction of the Muscles. Before we proceed to the Causes of Shaking, we shall first take notice of its two Differences : One is really convulsive, and occasion'd by a slight reciprocal Contraction of the opposite Muscles, and is commonly observed in acute and malignant Diseases ; or also without them from a disorderly, and yet not strong Motion of the Animal Spirits, in the fleshy Fibres of the Antagonist Muscles : The other comes nearer to an imperfect Palsy, than a Convulsion ; and proceeds from a defect of the Spirits, and their want of Motion and Volatility ; and this is familiar to old People, or those that are weaken'd with a long Fit of Sicknes, or incline to a Palsy.

The first Species of a *Tremor* has no other Causes, but those that are able to bring convulsive Motions ; for such a Shaking is really a convulsive Motion lessen'd, because the Members are bent, and extended a little ; but not sufficiently, nor so suddenly as it is in that more violent Motion, which is properly call'd Convulsive. The Cause then of this Distemper, is that mixture of heterogeneous Particles among the Spirits, or the elastick Force continually administred by the Blood ; which Particles are in no great quantity, or not very heterogeneous ; and consequently, they make but gentle Expansions of the Spirits, and therefore successive Contractions of the Antagonist Muscles.

The other Species of the *Tremor*, which is common to old People, and those that are weaken'd by Sicknes, proceeds not from the disorderly Motion of the Spirits ; but, as we have said already, from their Defect and Scarcity ; which Motion, and Scarcity of the Spirits, the Ancients call'd a debility of the Faculty ; for from this Defect in

quantity, or Motion of the Animal Spirits, it follows, That for Example an Arm, a Leg, the Head, or a Hand, being lifted up, cannot long be kept so ; for, to do this, there is some labour of the Muscle required, that by the Spirits, which are too few and languid, cannot be perform'd ; wherefore the weight of the Member conquers the Action of the Spirits, and because afterwards new Spirits flow continually into the Muscles again ; therefore the part, till it rests upon something, is now lifted up a little, by the moderate influx of the Spirits, and then depress'd again by its own weight ; and this is done successively, according as the influx of the Spirits, or the weight of the part are predominant. The external and procatactick Causes, that are able to furnish the Spirits with that disorderly Motion, to produce the first Species of a Tremor, may be fetch'd from what is said of the Syncope and Palsy. Not to be always repeating things, the Distemper being known enough of it self.

The Signs of the Causes may not only be learn'd from what is gone before, that augments the Motion of the Spirits, or that diminishes their quantity and motion, all which have been related in the foregoing Distempers ; but they may also be known by the different Position of the Member : As suppose that an Arm lies upon a Table or Bed, and ceases not from being moved and shook, this is a sign of a convulsive Shaking, proceeding from the disorderly Motion of the Spirits ; on the other side, if a Member leaves off moving and shaking, as soon as it is placed in a state of rest, it is a sign, that the fault is in the defect of the Spirits.

As to the Prognosis, the Shaking is not dangerous in it self ; but if it comes to People in Years, it attends them till Death ; yet by an accident it may be mortal ; that is, if a Palsy, or an Apoplexy succeed it.

To write the Cure of this Distemper here seems unnecessary ; for if the Shaking be convulsive, use the same Remedies which we have recommended in the Cure of an Epilepsy ; but if it proceeds from a Defect, and a Languour of the Spirits, you are to exhibit no other Remedies, than what are order'd in the Cure of the Syncope, and Palsy : If Age produces this Distemper, it is in vain to think of a Cure ; for the Shaking continues with old People till they die.

## C H A P. XII.

*Of Madness.*

**A**Mong the principal Distempers that use to disturb and take away our Reason, *Madness* is one: In *Latin* it is call'd *Furor*, *Insania*, and *Mania*, from the *Greek* Word *μαίνεσθαι*, to be Mad. It may be defined to be a Delirium, without Intermiſſion, attended with Fury and Boldneſs, but no Fever; for all that are taken with this Diſtemper rave continually, are fierce and unruly, and if not chan'd, tear their own Cloaths; and in the manner of ſavage Beaſts, beat, ſcratch, and tear whomever they meet; nor do they favour themſelves ſometimes: They watch moſt obſtinately, and have a prodigious Strength: When we ſay, that this Diſtemper is without a Fever, it is to be underſtood, that this Fever attends it not neceſſarily and eſſentially; for many mad People, nay moſt of them, are without a Fever; which if it attends *Madneſs*, it is by accident; and then it may properly be called a Complication of Diſtempers, becauſe it proceeds from quite different Cauſes. There are many degrees of *Madneſs*, ſome are intenſe, and others more remiſs; neither are all the mad Folks in the ſame height of Rage and Fury; but they are troubled with more or leſs of it, according to the Force of the morbiſick Cauſe; yet they are all crack-brain'd, and continually accompanied with little or much Fury.

To propoſe a Cauſe that is fit to produce the aforeſaid *Phænomena*, we muſt not, with *Galen*, alledge a hot and dry Temperament of the Brain, proceeding from an *Atrabilious* Humour; for this Cauſe, beſides that it is a meer Suppoſition, allows of burnt up and incinerated, and conſequently imaginary Humours; and likewise a hot and dry Temperament in the Blood and Brain is not eaſily to be conceived: Beſides that, as *Riverius* owns himſelf, it is clogg'd with abundance of Difficulties; for why there is no Fever where the Humours are burnt up; Why likewise there is not either Sleeping, or Propenſity to Sleep, as in a waking *Coma*; becauſe of the Aggravation of the Brain from the *Atrabilious* Humour, that produces a hot and dry Temperament in the whole Body.

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These seem'd Difficulties to *Platerus* not to be solved, which gave occasion of adding something to the hot and dry Temper, to constitute the Cause of *Madness*; for the aforesaid Author thinks, That there is a malign and venomous Quality, which is the principal Cause of *Madness*; as in a *Furor uterinus*, the biting of a mad Dog, or *Tarantula*, the eating of raging Night shade; in which he thinks likewise to be a malign Quality, as being also kinds of *Madness*; but tho' we consider, that something malign skulks in the said Distempers, and the *Madness*, it ought to be explain'd, what it really is, and the Name it self of Malignity, most commonly the Refuge of Ignorance, ought not to be alledged for a Reason, and therefore we must look out for more probable Causes.

They can be nothing else, than a violent Disorder of the Animal Spirits in the Brain; by reason of which turning from the right Path, and obeying no longer the Rule of the Soul, whilst they light on diverse Places, they make themselves new and unusual ways, and represent various wild Fancies to the Soul, which are ill composed or divided, as it is said in a Frensy; and thus Reason, to the exercise of which there is required a Motion and Digression of the Spirits, that is moderate, strait, and directed by the Soul, is thrown out of its Seat; whence comes the Delirium: But because the Animal Spirits are not only peccant in their Motion, but also in their Consistence; for they are somewhat thicker in their bulk, and in their quality; for they are sharp and alkaline; therefore, because of the violent Effervencies and Disorders, which they have with the *heterogeneous* Particles, furnished from the Blood, they make very great Convulsions in the Brain, and very strong Contractions in the Muscles; the more, because the Spirits of that Constitution are not so easily dissipated, whence the Rage, Boldness, and Strength are derived, with which commonly they resist several People, and break strong Cords: Their Cruelty and Outragiousness, which they exercise upon those about them, may well be derived from the Error of the Soul; by which it is likely, That their Friends and Relations are represented to them as Enemies; or if the distracted Person knows them, he thinks that they are contriving something against his Life or Fortune; not directed by Reason, they fall on whomsoever they meet with; and despairing of their Wishes,  
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lay violent Hands on themselves ; sometimes throwing themselves head-long out at Windows ; and this they perform like savage Beasts by meerly mechanick Motions : But that the mad People often feel not the outward Cold, nor seem to apprehend the touch of things that are hot, must not only be deduced from the strong Systoles of the Heart, occasioned from the Spirits, that are not so thin, and consequently drive the heat with greater force to the Circumference ; but also from the Motion and Influx of the Spirits, which by reason of the manner of their Substance, that is, their thick Consistence, make stronger Impressions, and so increase the natural Heat. To say nothing of the Soul, that being taken up by the variety of wild Fancies, perceives not the Cold, and more other things : But those heterogeneous Particles that make the intense Disorder in the Brain, are always fetch'd from the vitiated Blood, and are of no other Nature, than we said they were in a Frensy, Epilepsy, and Vertigo.

In a *Madness* is no Fever, because the Mass of Blood and the Spirits are two several Liquors ; whence it is no wonder, That the Disorder shews it self not in the Blood, tho' it is in the Spirits ; for the Particles that are *heterogeneous* to the Spirits, are *homogeneous* to the Blood, and so can raise no Fever.

The coming of this Distemper, besides the Age, Sex, and time of Year disposing them to it, is shewn by Head-achs, obstinate Watching, unsound and interrupted Sleeps, Cares, Troubles, a shining in the Eyes, a ringing in the Ears, immoderate Laughing, or Taciturnity ; but those Signs are dubious, and also common to other Distempers.

The Presence of this Distemper is known, by what is said in the Definition ; that is, a Delirium joyn'd with Fury and Boldness, without any Fever ; which Delirium and Fury, as we said before, are various in the several Patients, according to the greater or lesser violence of the Cause, or the Temperament's being more or less inclined to Anger.

As to the Prognosis, *Madness* is a grievous Distemper, and most commonly very obstinate ; for it lasts not only Months and Years, but it usually accompanies the Patient to the Grave. It is very difficult to be cured, because the Patients are not easily to be ruled ; that which is hereditary admits of no Cure ; yet that Species of *Madness* where the Fury and

and Delirium are less, is sooner cured, than that where the Symptoms are more raging.

The Cure of this Distemper requires many Remedies ; which, because the Patients commonly refuse them, must be given and administred by force or cunning. First, Bleeding is of great use here ; let it be often and copiously perform'd in the Arm, Foot, and Jugular : Cupping and Scarifying upon the Shoulder-blades is proper ; Emeticks in Glisters, and sharp Suppositories, are recommended here, to draw the morbidick Matter from the Head.

As for Purges, exhibit them now and then ; of Pills of Diagridium, with Extract of black Hellebore ; or prescribe purging Powders of Rosin, of Jalop- Diagridium, Diacarthamum, with Panado, a Conserve, or the Pulp of an Apple ; or Emeticks of Antimonial Preparations, which are here much recommended ; Liver of Antimony, its Glass, Regulus, Sulphur, or Flower ; as also a Decoction of Antimony, with other Diaphoreticks ; Guajacum, Sassafras ; but especially Hellebore-wine, which is counted a Specifick. Narcoticks, far from being shunn'd, must be often exhibited. A Bath of luke-warm Water ; and likewise when the Distemper rages too much, of cold Water, or at least that which is made so by pouring Cold to it, is of very great use ; and so is *Embrocation*, or wetting with Clothes dipped in cold Water, if the Patient be robust. If you prescribe Juleps, Broths, Apozems, Opiates, &c. that are attenuating, let them be moderate, aperient, sulphureous, and corroborative ; yet so, that they are not very hot ; for it is to be fear'd, that the Spirits might be more and more inflamed ; and therefore volatile Salts, and too spirituous Liquors, must be shunn'd ; nay, cooling and acid Remedies may be given sometimes : When the Motion of the Spirits is very intense, and the Rage great, copious drinking of Water is recommended. The many outward Applications prescribed by *Riverius*, are not approved of.

NOTE. ] See the Notes of the following Chapter.

CHAP.

## C H A P. XIII.

## Of Melancholy.

There is another sort of Distemper opposite to the foregoing, in which the Patients are likewise delirious without a Fever ; but without Fury or Boldness, or rather with Fear and Sadness ; which Distemper is simply call'd *Melancholy*, and differs from that which is call'd *hypochondriack Melancholy*, in abundance of Symptoms, that are used to attend the *hypochondriack Melancholy*, and shew themselves not in this ; at least, if it be by it self, and not complicated with another ; it differs also from Madness, by the Sadness ; and from a Frensy, by being without a Fever ; which if it comes sometimes, is meerly accidental, as we said in Madness : But it is to be observed, that in *Melancholy*, contrary to what happens in a Frensy, the Patients are not delirious in every thing, but only in one, or some few Particulars ; which as they vary in the several Patients, because of the difference of Temperaments, and Ideas impressed before, so they produce innumerable sorts of *melancholy* People ; whence some imagine themselves to be Kings, others Prophets, Dogs, Wolves, Rabbits, Glasse, Lime, earthen Ware, Wax, Grains of Corn, Dead ; nay, some have thought they were Angels, and Gods ; they are also, according to their various Fancies, affected with the Fear, for various things ; as if the Patient thinks he is a Rabbit, he is afraid of Dogs ; if Wax, the Sun ; if a Grain of Corn, of Hens ; if he thinks he's Lime, he dreads Water ; and so of the rest. The immediate and nearest Cause of this Distemper is, by the Ancients, wrongfully said to be a black and dark Animal Spirit, that is apt to produce Grief, as they believe a transparent thin one to be apt to create Gladness ; for such Qualities cannot fall in an insensible Body, as the Animal Spirits are ; but this *melancholy* Humour of a black and dark Colour, with its thickness infecting the Animal Spirits, and making them dark, which the Ancients alledg'd for an immediate Cause ; for as much as by its coldness it fix'd and condensed the Spirits, and so produced Fear, stands on no better Foundation, as any one of sounder Doctrine and Anatomy may easily judge.

The



The true and legitimate Cause then of *Melancholy*, that is fit to produce its Symptoms, is, as in all Deliriums, the disorder of the Animal Spirits; for in that a Delirium, of what sort soever it is, consists, which disorder affects not all the Spirits that dwell in the Brain; but only some Parcels, or Troops, that carry their disorderly Motion only toward one part of the Brain; and by striking various little Fibres, join the Ideas of two, or more things that ought not to be join'd, or separate those that should be join'd; for in this the disturbance of the Reason consists, therefore it is no wonder, if *melancholy* People are always musing on one and the same Thought; nor that, when they are brought off of that, they commonly reason well of other things; for that Disorder extends it self not through all the Brain, but only toward one part; the more, when the Spirits in that Distemper are more fix'd, and less volatile, and consequently not so fit to make Digressions. But that some believe themselves to be Wolves, others Kings, others again earthen Ware, proceeds from the various Fancies proposed to the Mind, which have been occasion'd by strong Ideas impressed before, or Marks deeply ingraven in the Brain, or other Causes less evident; which make, when the Distemper comes upon them, that the disorder'd Spirits run more to one, than any other part of the Brain, and so dispose them to conceive one Fancy rather than another. The Constitution of the Blood in this Distemper must be thick, and full of Acids; from which no Matter can be made fit for the Generation of Spirits, but such as are of the same Nature, and consequently not volatile, the truth of which is manifest in all that are, or use to be, troubled with this Distemper, in which all the Signs of an acid Humour's superfluously abounding in the Body are observed; as copious Spitting, no Thirst at all, a great Appetite, a blackish Colour, Leanness, acid Belching, Tumours in the *Hypochondria*; especially, if this *Melancholy* be complicated with that which is call'd *Hypochondriack*.

The Diagnosis of *Melancholy* may sufficiently be known from what has been said. The Ancients thought, That it proceeded from several Parts of the Body; as the Womb, the Liver, the Milt, the Stomack: But all these Divisions are useless, since it cannot proceed from any thing but the Blood, that furnishes the Spirits with heterogeneous Particles, and disorders them variously.

As to the Prognosis, this Distemper is Chronick, and very stubborn; especially when it is inveterate, or hereditary; for the acid Humour eludes the force of Medicines, especially Purgatives, and cannot be corrected, but by length of time, and various Remedies; whence it is call'd commonly the Rod and Reproach of the Physicians: That which is newly come, and proceeds from external Causes, is easier cured.

The Cure of this Distemper requires no small cunning; as well of those that attend the Patient as the Physician; for commonly *melancholy* People refuse all manner of Medicines; and not only them, but sometimes Victuals and Drink, when they fancy themselves to be Lime, or Dead; therefore they must be cheated into the use of them.

The Remedies that are proper here, not to repeat what has been said already, are the same with those which we have prescribed in the Cure of the hypochondriack Melancholy; the more, because these two sorts of *Melancholy* are often combined together; therefore look for the Remedies set down in the Chapter of the hypochondriack Melancholy. I shall only add one thing, which is, that Hellebore-wine is a Specifick in this Distemper.

### N O T E.

\* *Etmuller*, who by all means is to be consulted upon this  
 \* Head, thinks, That Madness at the bottom differs not  
 \* from the rest of *Melancholies*, and the other sorts of *melan-*  
 \* *choly* Deliriums. As to the Remedies, Bleeding is more  
 \* proper for mad, than *melancholy* People; the former ought  
 \* to bleed in several Parts of the Body copiously, that this  
 \* way, if it does nothing to the morbidick Cause, the Spi-  
 \* rits, which seem to be too many, being depauperated,  
 \* and the Strength impair'd, the Rage be at least for a time  
 \* restrain'd: But the Blood of *melancholy* People is to be  
 \* spared; and the use of Leeches applied to the Fundament  
 \* ought to be the only means of its Evacuation, which must  
 \* be a great Remedy that has regard to the Cause; by rea-  
 \* son, that in both Distempers, the thickness of the Blood,  
 \* and its acid Feculency, equally require it; and therefore  
 \* tartarous, nitrous, and martial Medicines, that are Speci-  
 \* ficks in the Scurvy and Hypochondriack, answer here both  
 \* Indications. Narcoticks are safer, and may be given in a  
 \* greater

• greater Dose to mad, than to *melancholy* People, for the  
 • reason above-mention'd, when I spoke of Bleeding, tho'  
 • even in them moderate Anodines are of use. The cold  
 • Bath is for no other reason useful to mad People, but  
 • because it curbs the Spirits, which is done likewise by  
 • Bleeding.

• Camphir is likewise recommended in Madnefs for the  
 • same reason; but in this Distemper they praise also the  
 • Brains also of young Puppies, and the Liquor distill'd from  
 • them, then impregnated with Vitriol, and still'd again  
 • thro' a Retort; the Dose of it is a Scruple: The arterial  
 • Blood of an Als received upon Linnen, which afterwards  
 • is infused in Wine or Beer. Some apply a hot Iron to the  
 • Crown of the Head; others prescribe even Castration:  
 • *Hartman* fomentes the Head with a Decoction of cephalick  
 • Herbs; to which he adds Bay-berries, and black Helle-  
 • bore-roots, in great quantities; and asserts, That thus it  
 • purges the Head, and even provokes Stools. The Female-  
 • Pimpernel, and *St. John's Wort*, are also wonderfully re-  
 • commended here.

• Fumatory, Borrage, Water-lillies, Balm, Milt-wort,  
 • Milk-whey, distill'd Milk-water, are rather Remedies for  
 • the *Melancholy*, or at least common to both Distempers.

## C H A P. XIV.

### *Of a Frensy.*

**EVEN** as there are many Deviations from the strait  
 Path, tho' the way of reaching the end is but one; so  
 our humane Soul may many and diverse ways err from the  
 true Road of Reasoning; whence arise various sorts of De-  
 liriums; as Madnefs, Melancholy, Folly, a simple Deliri-  
 um, a Frensy, &c. all which, that they consist in a bad  
 Disposition of the Brain and Animal Spirits, no Body in his  
 Senses dares deny; yet above all the rest, a *Frensy* throws  
 Reason the most frequently out of its Seat: It differs from  
 a simple Delirium but in the Degree; for as much as the  
 latter makes the Patient Light-headed only, for a little  
 while, and likewise his Thoughts and Words less absurd,  
 than the other, which being a continual Raving, and most  
 always

always the Companion of a Fever, makes the Patient in his Words and Thoughts, more swerve from Reason ; and likewise in the time of Intermission, more of the Distemper remains.

We hold not with the Ancients, that the Cause of a *Frensy* is an Inflammation of the *Meninx*, or the Brain ; because it was never found almost in the Corps of those that died of *Frenses*, and were open'd ; besides that, this would rather produce the Head-ach, or sleepy Distempers ; but we lodge it with the Moderns in the disorderly Motion of the Spirits ; or the preratural Fermentation of the Liquor, that makes the Animal Spirits, which chiefly acts its Tragedies in the middle of the Brain ; for it is not improbable that the Spirits, being of a *Salino-volatile* Nature, should be stir'd up to very great, and, as it were, febrile Effervescencies, if they were mix'd with heterogeneous Particles, suppeditated from the Blood, as acid Humours, or any other Particles, with which they could not easily unite, or that were indued with an excessive Motion ; this would make, that the said Spirits now made swifter and unruly, would be carried more impetuously and disorderly, without any Government, into the various Lodgings of the *Corpus Callosum* ; and upon the nervous Fibres, touching sometimes one, sometimes several together ; (besides that they are agitated by the presence of the Objects) and disturbing the Ideas impress'd long before ; which are afterwards variously and incongruously join'd or separated, according as the Spirits light on the diverse Parts of the medullar Substance, either singly, or on many together ; and seek various and unusual Ways. By what has been said it seems, that the Distinction of a *Frensy* in legitimate and spurious, or the *Paraphrenitis*, ought to be exploded ; for tho' we deny not, that this Distemper is most commonly Symptomatick, and comes upon several, especially acute Distempers ; yet we think, that the Brain is never afflicted with a *Frensy* ; unless the matter, that is able to move the Spirits disorderly, be first gather'd in the Head ; whence only an Idiopathick Distemper can arise. Add that the spurious *Frensy*, by Excellency call'd *Paraphrenitis*, proceeding from an Inflammation of the Midriff, is a meer Chimaera, and a meer Fiction, altogether repugnant to Anatomical Observations, and the Dissection of dead Bodies ; which teaches us, That the Midriff has often been corroded by



Matter, or likewise inflamed, without that ever a Delirium, or the least Craziness has follow'd it.

I shall spend no time in explaining the external Causes of a *Frensy*; such as the hot Air, being long in the Sun, the drinking of generous Wine, or hot Liquors, Poysons, &c. for how these things stir up the internal Cause to Action, must be manifest enough to all considering People.

Some Signs foretell an imminent, others declare a present *Frensy*: Of the first Class are Watchings, turbulent Sleeps, immoderate Talking, the Head-ach, a change in the Eyes, the Urine turning from thick, thin and transparent; for all these things shew, that the morbidick Matter is a gathering in the Brain, or a carrying in to the Head. The Signs of the second Class are a continual Delirium, which is easily to be explain'd from what has been said, immoderate Watchings, proceeding from the turbulent Motion of the Spirits, Oblivion, no Thirst at all, a slow and strong Respiration; all which Symptoms have their Origin from the various and many wild Fancies, with which the Mind is detained; for the Spirits being all imploy'd in framing and expressing them, and the Soul perpetually busy'd in viewing and contemplating them; allow not the due and usual Influx of the Animal Spirits into the Muscles, that serve the Respiration; nor lends a sufficient Attention to the Ideas that are already made in the Mind, or the Humours, that exert their Power upon the *Esophagus* and Throat: Whence it must follow, that the Respiration be altered, the Memory offended, and the Cause of Thirst, tho' violent, not perceived.

I speak not here of the Fever, and the Alteration of the Pulse, which have their peculiar Causes, and are not so much the Effects, as well as the Causes of a *Frensy*; yet they proceed not from an Inflammation of the Brain, or its Membranes, which there is not in this Distemper, as we said before; but they have their Origin from the heterogeneous Particles of the Mass of Blood, that are confused, and because of the Irregularity not easily to be mix'd.

All Authors teach unanimously, that a *Frensy* is full of danger; not only because the Brain and Spirits, the most noble Parts of the Body are affected; but also, because very grievous Distempers (if it lasts any time) use to follow

it ; as an Apoplexy, an Inflammation of the Brain, Convulsions, Swoounding ; therefore if there be any hope left, it is in the holding out of the Strength, and the less violence of the Symptoms, and of the Distemper ; which if you observe not, the Patient's Recovery is desperate.

The Cure of this Distemper requires diverse Remedies : Such are first, Bleeding in the Arm, Foot, and Jugular ; which, by cooling the Blood, restrains also the Motion of the Spirits ; then cupping and scarifying sharp Glisters, a strong Purge ; which either let out the morbid Matter, or by the Irritation and Pain which they cause, allay the tumult of the Spirits ; afterwards prescribe cooling Emulsions, by which the Motion of the Blood and the Spirits is very much temper'd : But to all these you must add, as your last Refuge, narcotick Remedies ; as Syrup of Water-lillies, of white Poppies, Diacodium, Laudanum, &c. which, because they are apt by their Coldness to appease the Spirits, or with their gross and viscons Sulphur, of which they abound, to intangle the Particles of the Blood and Spirits, and so restrain their Motion, are justly recommended above all other Remedies in a *Frensy*.

*N O T E.*

\* In a *Frensy*, after Bleeding repeated, according to the Strength of the Patient, and the Exhibition of Catharticks, of which the most gentle, as *Senna* infused in a great quantity of Milk-whey, are the best : You must apply Leeches to the Temples, if the Patient will allow of it, may if it can be dexterously done, and the Crotsness or rather Rage of the Patient will permit it, they should be applied to the inward part of the Nostrils ; the Leeches being dropt off, let the Blood run in a sufficient quantity ; by which Remedy, as if it had been a Charm, I have more than once seen phrenetick People cured in an Hour or two.

\* The outward Applications, which our Author is used to slight, ought yet not to be omitted ; I speak of a Fomentation of the Head, it being shaved before, which shall be made of cooling Herbs, adding the Heads of Greens, or dry Poppies bruised, and boyl'd in a sufficient quantity of Water.

## C H A P. XV.

## Of a Catarrh.

**A** *Catarrh*, which the *Latins* call *Destillatio*, in its large Signification, is in general any falling, or lying down of serous Humours upon the Parts ; whether it be upon the Eyes, Nostrils, Ears, Jaws, Mouth, Throat, Lungs, Wind-pipe, the Arms, the Sides, the Back, the Hips, the Knees, the Shoulders, the Kidneys, or Guts : Whence various Distempers proceed ; as Deafness, Ophthalmies, Blindness, *Epiphora*, or a Rheum of the Eyes, various Tumours and Ulcers ; Quinsies, Coughs, Hoarseness, the Phthisick, Asthma's, Nephritick, Arthritick, Rhumatick, Cholick, and Ischiatick Pains ; Numnesses, Palsies, &c. But, if the Name of *Catarrh* be more strictly taken, it signifies not every Flux of serous Humour upon all the aforesaid Parts ; but only on those that are near the Head ; as the Eyes, the Nostrils, the Throat, the Cheeks, the Jaws, the Wind-pipe, and Lungs ; and, according to these several places it afflicts, it is call'd by several Names : It is call'd on the Breast, by Excellency it is call'd a *Catarrh* ; if on the Wind-pipe, *Reuma*, or Hoarseness ; if on the Throat, *Bronchus* ; if on the Eyes, *Epiphora* ; if on the Nostrils, *Corysa*.

The Authors make likewise another Distinction of a *Catarrh*, viz. according as the Humours, falling down on the Parts, are peccant, either in quantity or quality ; or the Distemper proceeds from a common Cause ; for sometimes it is call'd Ferine, and that is when the serous Humours are very sharp and saline, making Ulcers by their Acrimony, and producing a Phthisick, Consumption, or Corrosions ; another is call'd Suffocating, viz. when the Humours flow in a great quantity, and all of a heap upon the *Bronchia* of the Lungs, or the *Larynx*, or *Pharinx* ; for thus, the passage of the Air being stop't, a Suffocation, and as it were Strangulation follow. Another sort is call'd *Epidemick*, commonly proceeding from the Coldness of the Air, or such another Cause ; for then it rages epidemically, and invades the greatest part of the People.

The Hypothesis of the Ancients about the Generation of a *Catarrh*, is not to be maintained; especially in an Age, where Anatomy seems almost to be arrived at its highest pitch. They thought, that all the Phlegm bred in the Brain, as its Metropolitan, and the Vapours elevated from the lower Parts, and condensed to Water in the Head, no otherwise than in an Alembick, fell down like Rain on the various Parts of our Body, and so made different kinds of *Catarrhs*, and Destillations: Whence in all *Catarrhs*, they thought the Brain was always the Part that sent it; the Passages, which they assigned for this raining Humour to get through, were the Holes in the Palate, through which the Serum, from the Ventricles of the Brain, the *Infundibulum*, the *Glandula pituitaria*, penetrated into the Mouth, Throat, Breast, or the Nerves, Arteries, or Veins; or lastly, in the Spaces between the Flesh, Muscles, and Membranes; through which the said Humours fell down on the Jaws, Shoulders, Arms, Back, &c. which falling down of the Humours they thought happen'd chiefly then, when the Brain was fill'd with abundance of Phlegm, by reason too much was bred of it in the Body, from an ill Temperament of the Liver; which, as they thought, was the Office of Sanguification; or when the Brain, troubled with a cold Temperament, could not incorporate all the Phlegm that was brought to it; for they thought, that the Phlegm was the Nourishment of the Brain: That this Opinion of the Ancients is built upon many false Foundations, must be manifest to any one, that at this time has but the least insight into Physick and Anatomy: For the Brain is not fed with the imaginary Phlegm; neither is the Phlegm bred in the Brain; nor are there Passages from the *Glandula pituitaria* to the Palate; nor from the Brain into other Parts; nor can the Humours be carried from the Throat to the Lungs without Suffocation. As for the Nerves, Veins and Arteries, it is certain, That the phlegmy and serous Humours cannot be convey'd from the Brain to the Parts, through these Canals; for according to the Laws of Circulation, the Arteries bring the Blood to the Brain; and the Veins carry it back again to the Heart it self; but the Nerves dispense throughout the Body the Animal Spirit, which is a very thin Liqueur, and consequently no phlegmy serous Humour, as being too thick, can be carried through them;



for it would rather produce a Palsy ; therefore we must look for another *Ætiology*, that is, render another Cause of a *Catarrh*, that is more agreeable to Anatomy ; we allow the Ancients, That a *Catarrh* is a lying down of serous Humours, which they call pituitous, on the Parts ; but the Passages and the Part that sends them we must assign our selves : For there is no other Part, that sends any Humours, in what Flux of Humours soever, but the Heart it self ; which by its repeated Contractions, pushes the Blood and Humours towards all the Parts of the Body ; nay, there happens very often a lying down of serous, or other Humours on the Parts, or rather a gathering of them ; which yet ought not to be imputed to the Part that sends them, but rather to the Part that receives them, whose own Strength fails ; and where there is a Relaxation, or some Obstruction, retarding the Circulation of the Blood, and so causing the Extravasation and Expansion of the serous Humour.

A *Catarrh* then is made, when the serous Humour starts out of the Blood Vessels, or the Extremities of the Arteries ; that is, in the little Bladders of Nutrition, or by means of the Glandules is (that I may so call it) spew'd upon the Parts, and poured into the Substance of them ; wherefore, as we see, there is no other Passage for the Humour, that makes a *Catarrh*, than through the Arteries, that carry the Serum together with the Blood ; which Serum, according as it is saline, or copious, or lies down on the Substance of the various Parts, or in the Spaces between the Flesh, Muscles, and Membranes ; produces various kinds of *Catarrhs* ; the Ferine, Suffocating, Epidemick, *Bronchus*, *Coriza*, Hoarseness, Pain in the Back, &c.

But the Causes that produce this Extravasation, and Expansion of serous Humour, besides the serous Constitution of the Blood caused from the Six unnatural Things ; besides also the Looseness, Obstruction, and Flaccidity of the Parts are ; being long in the Sun, foul Weather, the Head being kept hotter, and more covered than ordinary ; for those things Flux the Blood, or hinder the Transpiration ; and so dispose the serous Humours to Extravasation ; but the most frequent and common Cause is Cold, taken by being bare-headed, or bare-footed ; or not having the other Parts of the Body covered sufficiently ;

for

for as much as the Pores and Passages through which the Transpiration is used to be performed, by such a Cause are stopt; and how great this Transpiration is, may be seen in *Sanctorius lib. de medicina statica*; from which stopping, and retaining of the Vapours, the swelling and fullness of the Vessels is increased, and by the same thickness of the serous Humours, those as could not be evacuated through the Pores of the Skin, must lye down.

These Causes, or this Refrigeration acts on the Body with much greater force, if the Body, before the Refrigeration, or Cold taken, was heated by Exercise, or some other Cause; for then the Blood being in a ferment, and more agitated than usually, by the sudden Obstruction of the Pores, and consequently the retaining of the Vapours, dilates and fills the Vessels more; whence the *Serosities* flow more easily into the Parts, where they find an Opportunity; because by this Dilatation is also made some opening of the Pores, especially in those Parts, that are naturally of a loose Contexture: Therefore it is no wonder, if the Inequality of the Weather, that is, when from being Hot it suddenly grows Cold, is used to bring this Distemper; nor that, when it is very Cold, *Catarrhs* are epidemick, and especially when it comes suddenly; nor yet that those that are of a serious Constitution, as likewise those that are of too close, or too wide a Contexture, are most troubled with this Distemper.

The Signs of a *Catarrh* are manifest enough, not to be set down; for the Humour that falls down is either manifestly perceived, when it Stills from the Nostrils, Eyes, or Throat; or it shews it self by Tumours, Pains, Hoarseness, Coughing, and Ulcers, which it produces; there is commonly besides, an heaviness of the Head, a dullness of the Senses, Sleepiness, frequent blowing of the Nose, continual Spitting, &c.

As to the *Prognosis*, this Distemper is not mortal, unless it be serine, or suffocating, or falls upon the Lungs; otherwise it puts the Patient in no danger of his Life: If it falls upon the Nostrils, it is slight; if on the Throat, it is worle, and worst of all; if it falls on the Breast, as *Cornelius Celsus* says, it is also dangerous; when abundance of Humour falls down; and then, according to the greater or lesser Dignity of the Part, it is more or less dangerous:

In old Men it is more difficult to be cured than in young ; because they digest less than young Men, and make very bad Blood.

For the Cure of a *Catarrh*, many and different Remedies are required. Phlebotomy must always have place here, and ought, according to the Strength and Age of the Patient, be copious, and often repeated : Purging is also to be used frequently, with such things as expell the Water ; arthritick Pills with Agarick, or those call'd *Cecbie minores*, Rosin, and Powder of Jalap, the Electuary, or Powder of *Diacarthamum*, in form of a Bolus, or a Potion : Vomits may also be used, if the *Catarrh* be stubborn ; because they eradicate, and lead the Humours into those Passages ; and be sure to make use of Glitters, and those strong ones ; as often as the Body shall be bound ; and you shall find a necessity of making a Revulsion of the Humours, that flow into the Parts : The Ancients prescribe Snuffs, *Apoplegmatisms*, and Fumigations ; but they are of no great effect ; but Blisters, Setons, and Causticks, may do more good : If a *Catarrh* be serine and salt, prescribe all what mitigates the Acrimony of the Humours ; as Milk, Emulsions, a Sudorifick Decoction, the mucilage of the Seeds of Fleawort, and Quinces ; a Decoction of Marshmallows, and the ordinary Herbs ; Cassia, Bathing, &c. which we have ordered before in the Acrimony of the Humours ; if a *Catarrh* falls upon the Wind-pipe, or Lungs, it must be cured by Remedies prescribed against spitting of Blood, and the Phthisick : If it attacks the Joynts, administer the same Remedies you would give in the Gout : If it falls on the Throat, cure it like a Quinsy ; and so with the rest. Yet in all kinds of *Catarrhs*, Sudorificks are proper, because they consume the Humidities ; as also Fumigations of Brandy, or Wine, that red-hot Bricks are quenched in : Bagnio's likewise, or Sweating-stools, and above all Narcoticks ; as Laudanum, Syrup of White-Poppies, or Water-Lillies ; in the mean time, the Stomach is always to be corroborated ; because it is commonly in fault : Therefore prescribe Wormwood-wine, a strengthening Opiate, and digestive Powders. As for Drinking, let the Patient have Juleps ; and as to his way of living, and Diet, they must be more or less heating or cooling.

ing, according as there is a Fever, or not ; yet, because there happens but seldom to be a Fever, it is better to order attenuating, sweat promoting, and sulphureous, than cold Remedies ; because a *Catarrh* always proceeds from a serous Humour ; yet your Remedies may be tempered according as necessity shall require, or the Symptoms vary.

### N O T E.

‘ In what is said of the Causes of the *Catarrh* in the Text of our Author, there are faults, which I could not correct. Let it be sufficient to note on this Head, That *Catarrhs* proceed from the defect of a due Separation of the *Lympha* in the Glandules ; and that so the *Lympha*, peccant either in Acidity, or Sharpness, and Saltness ; as also Copiousness is the Matter of the *Catarrhs* ; and the Glandules are like Springs, which being greater, and more copious in the places near the Brain ; as the Neck, Throat, Nostrils, Mouth, Windpipe, &c. with the wide excretory Vessels, it is no wonder, that those Parts are call’d the Seat of what we properly call *Catarrhs*.

‘ As to the Cure, we ought to be very circumspect in the use of Purgatives ; for if they are given in the beginning of a *Catarrh*, or whilst the Humours are yet crude, or very sharp, and thin, they stir and agitate the Humours and *Lympha* yet more ; whence the Defluxion becomes more stubborn, and the Patient is thrown into great danger, according to the Nature and Seat of the *Catarrh*.

‘ It is Secondly to be observed, That if Narcoticks, or Anodines, as for example the Pills of *Styrax*, though a prudent Physician may, and must make use of them, to sweeten the Humours, in Defluxions upon the Lungs, be too hastily and unseasonably prescribed, that is to say, before the Plethora is lessen’d, a Suffocation is threatened.

‘ Further, all Remedies of Amber are proper in a *Catarrh* : And first, Oyl of Amber, to anoint the Crown of the Head with, or a drop or two drop’d upon it ; a Fumigation of Mastick receiv’d under a Hat, or  
Clôth



Cloth, to keep it in, is likewise beneficial ; and no less Praise deserves the volatile Salt of Amber, or the succinated Lignor of Hartshorn ; as also the Flower of Sulphur mix'd with Amber, and made up into Pills with the Extract of Elecampne ; to anoynt the Head with the Oyl of Marjoram, and Mastick is likewise recommended, as also the true Balsam, and Gum Carranna. Among the Specificks excells wild Betony, from the tops of which distill'd with Wine, after several Cohobations they make a very fine Spirit, with which afterwards they draw a Tincture out of Sassafras ; the Dose of this Tincture is a Spoonful, in their ordinary Drink ; they recommend likewise a Decoction of Lentiscinum, the Roots of Avens, and sweet Costus ; as also the Bark of Tamarisk, Myrrh, Spermaceti, &c.

*Examples* In a Suffocating Catarrh, Spermaceti is proper, from one to two Simples, in Hyssop-water, with Syrup of Ground-Ivy, or Horehound ; as also the Roots of Wake-robin, Castor, &c. Vomiting may be provoked by the expert Physician.

## C H A P. XVI

## Of the Head-ach.

THE Head may be afflicted with two sorts of Pain, viz. an inveterate and habitual one ; which is call'd *Cephalæa* ; and a new come one, which is call'd *Cephalalgia* ; there is also a third sort, which, because it affects only one half of the Brain, is called *Hemicrania*.

Besides the said Distinctions of the Head-ach, there are others alledged by the Authors ; as it is internal, when it has its Seat in the Membranes of the Brain ; and external, when it is in the Pericranium, or the Skin ; some Pain is Idiopathick and Essential, beginning first of it self, and proceeding from a fault in the Brain ; another is Sympathick or Symptomatick, which is used to attend the Distempers of other Parts, or of the whole Body. Besides one Pain is pricking from a Vellication ; another is tensive from the Distention of the Membranes ; and a third Pain is heavy and obtuse from the Substance of the Brain's being affected.

The Causes of the Head-ach are many, viz. all that is able to make a Vellication, Distention, Corrosion ; in a Word, all what can cause a *Solutio continui*, or a Separation of the whole ; which, according as they exert their Power in various Parts of the Head, produce various sorts of Head-achs ; as an *Hemicrania*, if they only act on one half of the Brain, or pervert its peculiar Disposition ; an external Pain is produced, if it invades the *Pericranium*, or the Skin ; and it is internal, if the Pain be within the *Pia* or *dura mater* ; it is heavy and obtuse, if the Substance of the Brain, and pricking, if the Membranes be affected ; lastly, if the Pain be of long standing, it is called *Cephalæa* : Such are sharp Blood, that is Blood, over charged with Sero-saline Particles ; likewise Blood, that is too much swell'd, and brought in too great a quantity to the Head and Brain ; such are also little bits of the Skull, pricking the Membranes, and sometimes Worms bred in the Brain, a Humour in the Brain gathered in the Membranes, or the Pericranium and the Skin ; as likewise the

the too close Contexture of the Skull, and its Seams being too nearly joyn'd, which hinders the Transpiration, and so the Exhalations retain'd in the Brain, augment the Swelling and Distention of the Blood.

The Diagnosis of the Distemper is manifest enough from the Complaints of the Patient ; but the Causes are not so easily distinguish'd : That Head-ach which is perpetual, and without Intermission, is caused by Humours, Worms, an Ulceration in the Membranes, or too close a Contexture of the Skull. If a Humour creates this Distemper, the Pain will be greater or lesser, according as it invades either the Substance or the Membranes of the Brain ; besides there will be Sleeping, or an Inclination to Sleep : If an Exulceration of the Membranes brings the Head-ach, the Pain will be very violent ; but Worms are seldom discovered, unless by opening of the Skull : If the Pain be not continual, but newly come, or is used to have Intermissions, or seldom to return, it is produced by the quantity of Humours brought to the Brain, that distends the Vessels ; which shall be known from a *Plethora*, a Fever, a Pulsation of the Arteries, heat of the Head and Temples : If these Signs are absent the Acrimony of the Blood is to be accused, oppressing and pricking the Membranes ; especially if its other Signs be there ; as Leanness of the whole Body, a bilious Temperament, and other things, that declare an Acrimony of the Blood : An external Pain, proceeding from a Blow and Fracture of the Skull, shall be known, by that the Patient can't bear the squeezing of a Hand, nor the turning of his Hair ; and that the Pain reaches not down to the Eyes : That the Pain is internal, shall be known by the contrary, *viz.* That the Patient can bear with Ease the squeezing of a Hand, the turning of his Hair ; and that the Pain reaches down to the Eyes. If the Structure, or the joyning of the Skull be too close, and that that has occasion'd a *Cephalea*, it is very difficult to be discover'd ; and a Physician must never suspect this, unless where all the Signs of the other Causes are absent.

The Prognosis of the Head-ach is, That commonly it is not dangerous or mortal, when it is of no long standing, and comes but seldom : That also which proceeds from

from slight external Causes, as being in the Sun for a great while, Drunkenness ; Exercise is of no ill omen : But on the other hand, that which is perpetual and never intermits, is full of danger, according to the grievous Causes that produce it : The External is less dangerous than the Internal Pain : That which is Symptomatick, ought to be judg'd of according to the nature of the Distemper from which it proceeds, and its own Violence.

As for the Cure, that never succeeds well, if it be caused from Worms, a Tumour, an Imposthume, an Ulcer ; at least if it be large : When a Depression and Fracture of the Skull occasions it, the Patient must be trepan'd, and the bits of Bone that prick the Membranes be removed by proper Instruments, not forgetting the universal Remedies, bleeding in the *Saphena*, and Narcoticks. The Trepan is proper also, where this Distemper is occasion'd from the close Contexture of the Skull, the Compactness of its Seams. If it proceeds from an Acrimony of the Humours, or a Swelling of the same, when they run impetuously to the Head. After Phlebotomy in the Arm and Foot, in the first case prescribe appeasing Remedies, Whey, Milk, Bathing, all things made of Barley and Almonds, Narcoticks, sudorifick Decoctions, or acid and refrigerant Medicines. In the second case, where the Swelling of the Humours distends the Vessels of the Brain, bleed frequently in the aforesaid places, and avoid Bathing ; prescribe acid, narcotick, and cooling Remedies ; shunning all things that may heat : The Patients are now and then to be purged with Portions, or Pills, *sine quibus* : Strong Glitters, nay, Vomits also are proper ; a hot Iron applied to the back part of the Head prevents the Distemper, and cures it, if it be inveterate, or returns frequently. Some recommend bleeding in the Forehead, the opening of an Artery in the Temples, Sheeps Lungs applied to the Head, or a hot Iron to the *Sutura coronalis*, or between the Fore-finger and the Thumb ; various Medicines of Vinegar, and *Cucupbe*, or Cephalick Caps ; but these seem to be of no use, and are out of date. You will find more benefit by hot or cold mineral Waters, according to the Nature of the morbid Cause ; Obstructions and Suppressions of the *Menstrua* and Hemorrhoids, commonly occasion this Distemper ;



per ; and then aperient Remedies are required : If the Head-ach proceeds from other Distempers, those Distempers must be cured by their proper Remedies. The Authors propose abundance of Remedies against the Head-ach, which for Brevity's sake I omit ; because they may easily be seen in their works.

### N O T E.

• That Species of the Head-ach, which is call'd Hemicrania, and counted one of the most stubborn Distempers, is often owing to a viscus and biting Humour, sticking to the inner Tunick of the Stomach ; therefore loathing and vomiting commonly attend this Pain. This is the reason likewise, that after an Emetick, such as the Syrup, or Oxysaccharum of Angelus sala, given from one to six Drams, or more, in Broth, the Patients are better, and the periodick Pains return not so soon.

• The Arteriotomy, or opening of the Arteries of the Temples, which by our Author is ranked among the obsolete Remedies, after the general Evacuations have been performed, has often wrought Wonders, as my self, and all our Country Physicians, can witness ; but this ought chiefly to be done in a throbbing Pain of the Head, than when this throbbing is most troublesome and sensible, by cutting the Artery asunder.

• Ourward Applications are also by no means to be exploded ; for they are beneficial at least for a time : They recommend the Alabaſter and Poplar Oyntments.

• Many Simples daily used by old Women, as well as Physicians, are likewise not to be neglected ; among these are Vervain, Roses, Ground-Ivy, wild Betony, Bloodwort, Goosegrass, to which being macerated by the Fire, you add Vinegar.

• Tea and Coffee are used to give present ease in the Paroxysm of the Head-ach ; but the Abuse, or too frequent use of it, is chiefly hurtful to those that are of a dry Temperament, for fear the Nerves might suffer by it ; for this Drink, taken in too large a quantity, or too frequently, affects the Nerves, as has been often proved by Experience.

## C H A P. XVII.

*Of a Quinsy.*

**I**F Distempers are call'd great from the Disorder, which they cause in the Functions, that are most necessary to Life, certainly a *Quinsy* is to be counted none of the least, where at once both breathing and swallowing are affected, without either of which Man cannot live. In *Latin* it is called *Angina*, from *ἀγχο*, I strangle; and signifies in general any Disorder in the Throat, which hinders the swallowing of sometimes solid, sometimes liquid Food, and sometimes both, according to *Riverius*; but because this Distemper sometimes proceeds from quite different Causes, and sometimes invades various, tho' neighbouring Parts, therefore it is also severally divided, according to the difference of its Causes, and the part affected; for if a *Quinsy* is without a Fever, and produced from a pituitous Humour, falling upon the *Pharinx*, or part of the *Larinx*; as suppose the adjacent Glandules, or which may sometimes happen likewise from a Luxation of one of the *Vertebrae* of the Neck, by which the beginning of the *Esophagus*, and Wind-pipe are oppressed; then it is called *spurious*: But if it proceeds from neither of the aforesaid Causes, but an Inflammation joined with a Fever, then it is used to be called *Legitimate*; and this latter sort the Ancients divide in four kinds; a *Synanche*, when the Inflammation invades the internal Muscles of the *Larinx*; a *Parasynanche*, when its external Muscles are only affected; and again a *Cynanche*, when the inward Muscles of the Throat are inflamed; and a *Paracynanche*, when the Inflammation is only in the external Parts of the *Pharinx*, or the Muscles of the Neck. The Causes of a *spurious Quinsy* may soon be gathered, from what has been said; and those that can bring a *Legitimate* one, are the same that are able to produce Inflammations in all other Parts of the Body, viz. the Blood from the carotid Arteries, copiously flowing into the Throat, and Wind-pipe, and there; because of the Looseness of the part, or any other Cause.

Cause, as its own quantity, effervescency, or viscosity, remaining, retarding the reflux of the Blood into the Heart, and restagnating ; which makes, that the same Blood extravasated, and poured out in the Substance of those Parts, by the continual Pulsation of the Arteries, ferments and putrifies ; and by means of the Particles, exhaling from the Inflammation, and prompted to the Blood, that circulates in the adjacent Parts, produces a Fever, as a Symptom of a *Quinsy* ; though sometimes the Fever is essential, and has the *Quinsy* for its Symptom.

These external Causes are foul and inconstant Weather, to be cooled too suddenly, to drink cold Liquors, to be too long in the Sun, to expose the bare Head to the cold Air, to bawl too much, and the like, taken from the Six unnatural Things.

The Diagnosticks of a *Quinsy*, which is called spurious, are the absence of the Fever, or these things that shew the Luxation of the *Vertebra*. But in a legitimate *Quinsy* there are, besides the difficulty of breathing and swallowing, which it has common with the first ; a Fever, Pain, and heat in the Part, and sometimes likewise a redness appearing outwardly ; by all which it may be distinguish'd from the other ; but whether the Inflammation is in the inward or outward part, either of the *Larinx* or the *Pharinx*, is known by the greater or lesser difficulty of breathing or swallowing, by the profundity of the Pain, and the redness shewing it self more or less in the Neck.

As to the Prognosis : That a *Quinsy* is dangerous, may be known from the unavoidable necessity of breathing and swallowing, we lye under ; for since in this Distemper the Passage of the Air, design'd to perfect the Blood in the Lungs, and that of the Victuals taken, to repair the loss of the Blood, spent in the Nutrition of the Parts ; since I say both these passages are stop'd, the consequence must be dismal, and nothing but a stoppage of the Lungs, Peripneumony, Suffocation, and Death it self, can be expected ; which yet is less to be feared in a spurious *Quinsy*, from a pituitous Humour, than when it proceeds from a Luxation of a *Vertebra* ; and in a legitimate one, when the Inflammation is more external,

nal, and hinders less the Passage of the Air and Viscerals, than when it is internal.

The Cure of this Distemper is almost the same with that of all other Inflammations, viz. a Revulsion is to be made, and the Blood gathered in the Throat, or extravasated, is to be drain'd by bleeding in the Arm and Foot; as also in the Neck and Jugular: In the beginning strong purging Glisters must be prescribed, to expell part of the morbid Cause by Stool, and nourishing ones afterwards; especially, if the Patient can get but little down; and in this case you may also make use of a small Pipe, through which by the help of a Syringe, you may give the Patient some Broth, or other nourishing Liquor: His Diet must be spare and cooling: Let him lye high with his Head, and his Neck upright.

A Purgative, and that pretty strong, is to be exhibited, the sooner the better; or also a Vomit, according to *Riverius*; partly to eradicate the morbid Cause more potently; partly, that the time of Purging, by the great difficulty of swallowing, in this Distemper be not slipt; yet it must not be administred, unless some Bleedings, as I said, which empty the Vessels, and as it were prepare the way for the Purges, and promote the regress of the Blood, which is extravasated and stagnating in the Parts, in to the Vessels and Heart, are gone before. Of Blisters, and Cupping under the Chin, and likewise of rubbing, the opening and tying of the Veins under the Tongue, I approve not; but make use of all the Remedies which we have propos'd in other Inflammations: Among the outward Applications, Gargarisms, and repelling Fomentations, are proper of Oxycrat, or an adstringent Decoction; afterwards adding resolving Medicines; all which may be seen in *Riverius*: If the Swelling inclines to a Suppuration, let the Decoction be emollient and suppurating; when it is ripe it must be broke, either with a Finger that has a long Nail, or a little crooked Penknife, made for the purpose, with a wooden Handle, which is to be held between two Fingers: If the Swelling cannot be seen, you must use an Instrument, to open the Mouth, and keep the Tongue down; if the Imposthume is more remote, fix a sharp Iron Point into a



longer Strick ; if the Tumour be outward, and toward the Neck, prescribe emollient and suppurating Fomentations, and afterwards let it be cauterised, then cure it as you do other Ulcers ; the cutting of the *Larynx* is an Operation seldom perform'd, yet may be of use : That Species of spurious *Quinsy* which proceeds from a Luxation of a *Vertebra*, is incurable ; but the other is easily cured with dissolving outward Applications.

### NOTE.

• The opening of the *Ranule*, not approved of by our  
• Author, or thought uselels, has often after the opening  
• of greater Vessels, proved very successful ; but it is some-  
• times followed by so great an Hemorrhagy, that it is  
• hardly to be stench'd by Stipticks : To the Gargarisms  
• is added in the beginning the Juice or Rob of Nuts, pre-  
• pared with Honey.

• Other Gargarisms are made of the Juice of Cray-fish,  
• and House-leek ; to which, if it can be bore, is added  
• a little Sal-Armoniack, or fix'd Nitre, or volatile Salt :  
• A Decoction of Privet is likewise useful, with a little Vi-  
• negar, in a spurious or white *Quinsy*. Cataplasms are  
• also applied to the Throat of a Swallow's Nest, pow-  
• der'd and sifted, boyl'd in Water or Milk, adding a suf-  
• ficient quantity of Honey, or Camomil and red Roses ;  
• Pork's Lard, with *Album Gracum*, which latter Medi-  
• cine is used likewise inwardly by some, to a Dram in  
• Oyl of sweet Almonds : They make also Cataplasms of  
• Onions roasted under the Embers. The *Spiritus nitri  
• dulcis* is recommended by some, in Portions of proper Wa-  
• ters : Purging, perform'd with the Cautions observed by  
• our Author, is useful : But I cannot consent to his con-  
• demning of Blisters, that in phlegmatick *Quinsies*, after  
• the general Evacuations, are of great Efficacy, by bring-  
• ing away part of the viscous Lympha that is thrown out  
• of the Glandules.

## C H A P. XVIII.

*Of an Asthma.*

**I**T is constant, that the unavoidable Business of Respiration, which consists in the ingress and egress of the Air in, and from the bladdery Substance of the Lungs, is disturbed as many ways as there are Distempers, not only of the middle Cavity, but several also of those that invade the upper and lower Cavities of the Body; but the Disorder which it labours under in the Distemper, which is call'd *Asthma*, from ἀσπναισις, to breath difficultly, is very considerable; in this the Patients, because the principal Organ of Respiration, the Lungs, are idiopathically and chiefly affected, breathe short with difficulty, and great labour of the Breast, yet without a Fever; but as this Distemper has many degrees of Violence, so it is distinguish'd in several sorts; the first of which, call'd *Dyspnea*, though even here the Respiration is short and thick, is the slightest of all; because of the little quantity or violence of the morbiick Cause. In the second sort, to whom the Name of *Asthma* properly belongs, the work of Respiration is much more laborious; for there not only the *musculi intercostales*, but also those of the Abdomen, are violently moved; and the Air passing through the stuff'd up tracheal Ducts of the Lungs, as it hits the obstrusive Matter, causes a rattling and wheezing: But in the third and worst sort, which is call'd *Orthopnea*, the difficulty of breathing is the greatest, and almost suffocating; so that, because of the extraordinary violence of the morbiick Matter, the Patients cannot breathe, unless they sit, and hold their Necks upright; and here not only the aforesaid Muscles, but also those of the Breast and Shoulders, are moved very violently. Besides the said Distinction, an *Asthma* is also distinguish'd in pneumatick and convulsive: The first properly belongs to the Lungs, whose Pipes being oppress'd and obstructed, admit not the usual quantity of Air, required for the Attenuation of the Blood; but the lar-

ter belongs to the Parts that move the Breast, viz. the Muscles, that serve the Respiration, the muscular Fibres of the *Bronchia*, and the Nerves that attend them ; for it the Spirits cannot in their usual quantity flow into the Muscles of the Breast, and the carnosus Fibres of the Wind-pipe ; because the Nerves are obstructed or stirred up to preternatural Motions, by heterogeneous Particles, (which we think are able to raise Convulsions) it follows, that the Respiration must be perform'd with difficulty, and consequently an asthmatick Disorder be produced ; but because this last sort of *Asthma* invades People very seldom alone, and is commonly the Companion of another Distemper ; as an Apoplexy, the Night mare, the Hypochondriack, hysteric Passion, Epilepsy, &c. we'll pass it over in Silence here, and hasten to the Causes of the *Asthma*, which is called Pneumonick.

These then are chiefly referr'd to two Classes, viz. such as are obstructive, or invading the inner Cavity of the *Bronchia*, and others, that squeeze and straiten from without the Sides of the tracheal Ducts : The *Bronchia* are chiefly obstructed by a viscus Humour, not falling from the Head to the Lungs, (as the Ancients would have it) since there is no Passage from the Head into the Breast ; but squeezed out of the Glandules that are on the Surface of the Wind-pipe, or slip through the extreme Orifices of the Arteries, opening into the Canal of the said Wind-pipe : For since the Wind-pipe, and its Branches, spread through the Lungs, are continually moisten'd with some Humour shed from the Glandules, that are dispersed throughout its Ducts, and in great Animals, as Horses, Cows, and Elephants, to be seen : If this Humour is grown more viscus than it should be, by Evaporation of the thin Parts from the heat ; or, that it be strain'd so from the serous Blood through the Glandules, it may, gathered in greater or lesser quantity, and sticking in the Pipes of the Lungs, more or less shut the free Passage of the Air, and so cause a greater or lesser difficulty of Breathing : This it may do by help of the serous Juice, flowing from the Blood Vessels into the *Bronchia*, by the way of a Catarrh ; which, by sticking

to their Sides, may likewise interrupt the Business of Respiration, by its quantity and viscosity, which it contracts in staying. The Branches of the Wind-pipe are externally squeezed and oppress'd, not only by the Blood, too much fermenting in the Vein and Artery of the Lungs, or gathered there in too great a quantity; but also little Swellings, that sometimes are bred in the substance of the Lungs, hard Swellings, or little Stones, dispersed through them; for such Bodies must straiten by their bulk and hardness, the Cavity of the *Bronchia*, to which they are adjacent, and consequently by shutting the Passage of the Air, render the Respiration laborious and difficult.

The external Causes of an *Asthma* may soon be gathered, from the abuse of the Six unnatural Things; as the excessive use of thick and viscous Food; a thick and foggy Air, Sleep, Rest, sedentary Life, Sadness, Sorrow, and other things, that are apt to make the Blood thick and viscous; all which, how they can alter, and pervert the Disposition of the Blood, is known even by the Vulgar.

The Diagnosis of this Distemper, and its several sorts, is altogether manifest, from the Description which we have given of each of them; but the Signs of the obstrusive or oppressing Causes, may be known by the more or less wheezing, or its total Absence.

The Physician ought always here to prognosticate the greatest danger, which yet must be less in a *Dyspnea*, than in an *Asthma*; and in that less than in an *Orthopnea*: There is also much less hope, when the Canals of the *Bronchia* are stop't by a matter, contained within them, than when they are only straitned by some Cause, that squeezes them externally: In short, any *Asthma*, because of the disorder of the vital Function, and the sad Distempers that succeed it, viz. a Cachexy, Dropsy, suffocating Catarrh, Phthisick, Pleurisy, and Peripneumony, is always of a bad omen.

As to the Cure; since this Distemper, excited from various Causes, has its Exasperations, and as it were Periods; it ought to be two-fold; the Cure in the Paroxysm; and that which is to be observed out of it: In the Paroxysm, a Vein is to be open'd presently;



sharp Glifters are to be given ; a Phlegm-purging Remedy ; and even Vomits, which by frequent experience have been found very beneficial, must be exhibited ; all which must be succeeded by attenuating Medicines ; as volatile Salts, Brandy, Sal-armoniack, Cinnamon, and Treacle-water, Aqua vitæ Matthiol. ; at last prescribe expectorating Remedies, that can cut the thick Humours, if there be any in the *Bronchia*, and these may be used in form of a Lohoch ; or a Fumigation taken in at the Nose and Mouth.

But in the absence of the Paroxysm, because there is some respite allowed, the Mass of Blood is to be insensibly corrected by degrees, and the thickness of the Lympha, or serous Humour, is to be attenuated, which is performed by several sorts of Remedies ; as opening Apozems, Juleps, and Broth made with aromattick Herbs, and quickned with volatile, as well as fixed Salts : Glifters sufficiently purging, Catharticks exhibited now and then, to which Remedies bleeding always must be joined ; which because it empties the Blood Vessels, that are copiously dispersed throughout the Substance of the Lungs, and promotes the circular Motion of the thick and viscous Blood, which was slow before, makes more room for them to dilate themselves, by leaving an opening in the *Bronchia* ; and a more free Passage for them and Expiration of the Air, and so helps not a little the otherwise difficult Respiration.

The Remedies therefore, that are proper in an *Asthma* are, besides the universal ones, as Vomits, emetick Wine, strongly purging Pills and Potions, Glysters, &c. the Juice of Orris mix'd with hippocratick Wine, Cinnamon-water with Sugar, or a Spoonful of Syrup of Violets ; Saffron given in Wine, *Aqua Vita* sweetned with Sugar, Coltsfoot-water distill'd, a Lohoch of Syrup of Horehound, of Coltsfoot with the Juice of Liquorice and Oximel ; the smoaking of Tabacco and Coltsfoot, the Steam of hot Brandy drawn up : Of Snuffs or Blisters I approve not ; nor indeed of Fumigations very much, tho' the Authors recommend them : Pills also may be prescribed, that are proper in this Distemper ; of Aloes, Gum armoniack, Flower of Sulphur, Saffron, adding likewise Diagridium ; if you would have them more purg-

ing.

ing, Briony-water distill'd; the Water of Tabacco of *Quercetanus*, Woodlice macerated in Wine, a Decoction of attenuating Roots and Herbs, Hyssop, Horehound, Elecampane, Sasyrion, Florentine Orris, Raisins and Liquorice, with a proper Syrup; Turpentine, or its Spirit; Flower of Sal-armoniack, Flower of Benzoin; an old Cock boyl'd, with opening and attenuating Roots and Herbs: Besides these things, Chalybeats, and mercurial Medicines, fix'd and volatile Salts: In a word, all Medicines are proper, that are spirituous, attenuating, and aperient, to be given in several Forms, which are to be altered now and then.

Yet note, That the above-mentioned Medicines are to be sparingly prescribed, that they may not heat the Blood too much.

### NOTE.

' The *Asthma* may be divided in moist and dry; the first Species is fomented by a vitious Matter; which being voided, it ceases; the other without any such Matter, is caused from a Convulsion of the Muscles, that move the Breast, especially those of the Midriff; the Matter of the moist *Asthma*, viz. the viscous and mucilaginous Juice is not only found in the Lungs, but often likewise in the Stomach, according to *Etmmuller*, whom consult: As to the Causes of the Convulsion of the Midriff, or the Muscles of the Breast, which constitutes the other Species of the *Asthma*, they differ not from the Causes of other Convulsions.

' In the *Asthma*, of what Cause soever it proceeds, Bleeding is beneficial; from that in a moist *Asthma* proceed to Vomits, of which there are several sorts; the Syrup of Tabacco is proper, but it must be well prepared; Elecampane cuts the viscous Matter, and is much recommended here; so are Hore-hound, Ground-Ivy, Hyssop, Colts foot, Scabious, Penny-royal, Calamint, Carduus Benedictus, Savory, wild Betony, wild Saffron, Saffron, Florentine, and other Orris, Nettles, Cresses, all the capillary Herbs, Okefern, Gum-ammoniack, &c,

They use likewise the Water of Rape-flowers, with a little Saffron, the Water or Juice of Radishes, the Decoction of Sassafras, with Raisins, and Ceterach, the Water of Florentine Orris, prepared with Saffron, and Spirits of Wine.

The Root of Wake-robin, macerated in Vinegar and dry'd, is also very proper; they make a Powder of it, whose Dose is a Dram, in Wine or Broth; half a Dram of Sperma-ceti is likewise taken in some hot Draught, or Hyfop-water.

There is a Linctus made of Wood-lice, with Honey, and a little Gum armoniack; they prescribe also Emulsions of fresh Wood-lice drown'd, and wash'd in Wine, with a few Pistake and Pine-nuts pounded, pouring to it the distill'd Water of Cray-fish, and Syrup of Ground-Ivy.

Some recommend Turpentine dissolved in the Yolk of an Egg, with a sufficient quantity of Water; as also Balsam of Sulphur: These things are for the moist *Asthma*.

But in the dry they praise Castor, Wood-lice, Worms, volatile Salts, the Spirit of humane Blood, Laudanum, anointing with Nerve-oil and Castor.

## C H A P. XIX.

*Of an Empyema, or an Imposthume of the Lungs.*

THE Name of *Empyema* in general, signifies a Suppuration ; that is, a Collection of Matter in any part of the Body whatever ; for *πύον* in Greek is Pus in Latin ; and hence comes *Empyema*, or a gathering of Matter ; yet Custom has made, that among Physicians *Empyema* is commonly taken for that gathering of Matter only which happens in the Breast, and may proceed from various Causes ; for it either follows upon a Plurisy, or Peripneumony, that is an Inflammation of the internal or external Substance of the Lungs ; for as much as the Blood extravasated, and making an Inflammation in the Substance of the Lungs, or their external Surface, is suppurated in time, and turns to an Imposthume ; which being broke by the Acrimony of the Matter, or brought from the Center of the Lungs by degrees to their Surface, the Matter runs out, and flows into the Cavity of the Breast, sometimes in the Right, sometimes in the Left part, and sometimes in both together, according as the Imposthume is, and breaks in either the Right, Left, or both the Lobes ; for there is a Membrane call'd the Mediastinum, dividing the Cavity of the Breast, as well as the Lungs, in two parts ; that a fault being in one part, it should not easily be communicated to the other. Another Cause which may occasion an *Empyema*, is the efflux of the Blood into the Cavity of the Breast ; as by a Blood-Vessel being broke, or an Ulcer raised from sharp Humours, in the external part of the Lungs, or a straining, or an Extravasation on the Pleura, from the Blood-Vessels, proceeding from any Cause whatever ; that is, from a Blow, Fall, a Contusion, a Rupture, or lastly, from a Wound in the Breast, penetrating the Pleura and Lungs ; for whilst in all these Cases the Blood runs out into the Cavity of the Breast, by which its circulating Motion being lost,



lost, its Principles separate one from the other, it must of necessity be corrupted, and putrify; and in a word, suppurate and produce an *Empyema*, or Imposthume. Other Causes occasioning this Distemper, are alledged by the Ancients, viz. a salt Phlegm, distilling from the Brain; or Matter, by an Inflammation of the Larinx, or Pharynx; that is, by a broken Imposthume of those Parts, poured into the Cavity of the Breast; but those that understand Anatomy, need not be long in confuting this Opinion; for there is no Passage from the Brain into the Lungs, but that of the Blood by Circulation; and the Matter, besides that by descending into the Wind-pipe, it would choak the Patient, cannot be poured in the Cavity of the Breast, without corroding the Lungs, whence Death would follow before an *Empyema*.

The Signs of an Imposthume, or Matter collected in the Breast, are; First, if in a Pleurisy or Peripneumony, that are not cleansed, the Fever grows very high, and then remits; for then the Suppuration is a making: Secondly, a shaking, caused by the Acrimony of the Matter, vellicating the Membrane of the Lungs, the Midriff, and by a Consensus the other Membranes. Thirdly, a weight and heaviness felt in the Part, that is in the Cavity of the Breast; especially if the Matter be very copious. Fourthly, the Sense of something floating, chiefly when the Patient turns from one side to another; for then the Matter in the Cavity is stirred, and makes the Fluctuation. Fifthly, a more or less difficult Respiration, according as the Cavity is more or less fill'd with Matter; and that, because the due Expansion of the Lungs is hinder'd, or they are agglutinated to the Pleura; or, because the Lungs are stop't by the Peripneumony and Pleurisy: At last, the Spittle becomes to be likewise mattery; because the Lungs not only soak in the floating Matter, viz. thro' the part that is tore, (for the Matter cannot pass thro' the Membrane) but the Ulcer also commonly continues after the Imposthume is broke in the Lungs, and this furnishes the quantity of Matter, that is voided; that the Distemper is of a long standing, and confirm'd,  
after

after the said Signs, is shewn by a slow Fever, which increases at Night, and proceeds from purulent Particles, that are communicated to the Blood, and heterogeneous to it; its increasing also at Night, is caused from the Cold, by which the Exhalations are then retained; but the Sweats that come at Nights, are caused by the Effervescencies that are augmented at that time: The Cough is owing to the Irritation of the *Bronchia*, made by the Matter contained, or soaked in the Lungs; the Patients are hollow-eyed, and lean all over, because of the ill mixture of the Blood, unfit for the Nutrition of the Parts; but whether the Right, Left, or both sides be affected, shall be known, not only by the Inflammation, that is gone before in the Right, or Left side; but also by the Heat, Weight, and Fluctuation; likewise by the Application of a wet Cloth, which in the Side affected shall be dried presently. The last Sign which *Riverius* proposes, is an œdematous Tumour, shewing it self outwardly in the affected Side, which is made from the thinner Parts of the Matter, soaked up by the *musculi intercostales*, and the Skin; which after the other Signs, makes the Diagnosis sure, and insinuates, that the Side may be safely open'd. When the Distemper shall proceed from an Ulcer, caused by sharp Humours in the external Parts of the Lungs, or by a Blow upon the Ribs, or a Wound in the Breast, it shall be known by the Signs of the Phthisick, or made manifest by the Senses, and Relation of the Patient. We set not here down the Signs, to distinguish an *Empyema* from a Dropsy of the Breast; because that Difference shall be made manifest, from the Signs that are to be given of the Dropsy of the Breast.

As to the Prognosis of an *Empyema*, if it follows upon a Pleurisy, Peripneumony, or Ulcer; it is bad, and so much the worse, as it is attended with worse Symptoms, viz. a slow Fever, Leanness, and according to the quantity of the gather'd Matter: The whole Prognosis is contained in the Text of *Hippocrates*, in the second Book of Prognosticks, *Titul. 63.* which you may see in *Riverius*; but when the Distemper proceeds from

a Blow, Wound, or other external Causes, it is more easy to be cured; especially if the Wound penetrates not deep into the Lungs. Some Authors say, that the Matter in this Distemper may be evacuated by Urine, of which whoever is versed in Anatomy must always doubt.

The Remedies that are to be prescribed in this Distemper, are vulnerary Decoctions, made with Sanicle, Bugales, Acrimony, Mouse-ear, Betony, St. John's Wort, red Roses, Mead, Turpentine, its Spirit, and Balsam of Sulphur terebintinated, Balsam of Peru, a Decoction of crude Antimony, with other Sudorifics, at the beginning. But as for emollient Cataplasms, and Plaisters, outwardly applied, I cannot see what good they can do: In the mean time, emollient and purging Glisters, and likewise Purges, may be prescribed: Bleeding is not so proper; but because the Distemper yields not to these things, you must come to the Operation, that the Matter may be evacuated. The opening is to be made in the Breast, about three Inches under the corner of the *Homoplata*, or Shoulder-bone, immediately under the Rib; because in the lower part immediately are the Nerves, Reins and Arteries: The opening is made, either by first applying a Caustick, which eats through by degrees, as far as the Pleura; and then a little Pipe made on purpose is put in the Orifice; or the Side is simply open'd by a pricking Instrument, a Lancet, or the like; the Matter is drawn out at several times, not to dissipate the Spirits, the Patient lying backward; and now and then two or three Ounces of some vulnerary Water may, by the help of a little Syringe, be injected into the Breast, stirring the Body a little, that the Breast be washed; then let the Patient turn toward the Side, that the Matter and the Injection may be evacuated: If the Breast be perforated by a Sword, or other Instrument, and that there be a Suspicion of extravasated Blood; then, if the Hole be in a part, where the Matter may easily run out, the Pipe may be put in through the Wound, and the Injections made in the same place; otherwise the Side, as we said before, is to be open'd about 3  
Inches

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Inches under the corner of the Shoulder-bone. Some, by reason of a Wound, have new Matter continually making in the Breast ; and they ought always to wear a little Silver Pipe, through which they may empty, every Day, the Matter that is contained within.

**NOTE.]** See the Notes of the following Chapter.

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**C H A P.**

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## C H A P. XX.

## Of a Dropsy of the Breast.

**A** Dropsy of the Breast is, a Distemper so very like, and nearly related to an Empyema, that it is with difficulty distinguish'd from it. It is a gathering of serous Humours in the Cavity of the Breast; or a Collection of the same in the little Bladders, that are dispersed over the whole Surface of the Lungs, as Authors have sometimes observed. It comes seldom by it self, and is most commonly complicated with the other kinds of *Dropsies*. I shall not here treat of its Causes, Nature, and manner of being produced; because all those things may be seen in what we have said of the *Dropsy* in general; nay, even the Cure is the same, for no Remedies ought to be prescribed in this Distemper, adding only some Corroboratives, but what we have prescribed in the *Dropsy*, unless it be perhaps the opening of the Side, for the Evacuation of the Water, which yet for the most part is not perform'd with better success, than the Paracentesis in the Abdomen; because that, as we said of the *Dropsy*, such great quantities of Water cannot be contained, or extravasated in the Breast, or Abdomen, but there must be a very great fault in the Blood, and *Viscera*; which cannot be easily corrected, tho' the Waters be evacuated: Some make this opening in the fleshy space between the Ribs, others in the Ribs themselves, perforating them with a Trepan, that the Water may flow, and be stopt easier when there is occasion. It remains then, that treating of the *Dropsy* of the Breast, we should, as much as possible, give its Diagnostick Signs. *Hippocrates* describes them in the Second Book *de morbis*, under the name of the Signs of the *Dropsy* of the Lungs; his Words, you may see in *Riverius*. First, the Sense of floating in the beginning of this Distemper is greater, than it is in an Empyema, because the Water, when it is moved, as being more liquid, makes a greater sound; this floating ceases, especially when the Respiration begins to be difficult, *viz.* when the Cavity is almost quite

quite fill'd, and the serous Humour has no more room to move in. The difficulty of the Respiration is greater than in an Empyema, because the Matter seldom fills the whole Cavity, but the Water fills it most commonly. Another Sign of this *Dropsy* is, when a Pleurisy, Peripneumony, and other Diseases, that occasion the Water to be gather'd here, are not gone before: As also when there has been a shaking, which follows upon all Suppurations: Besides, the *Dropsy* of the Breast is attended with a Swelling of the Feet, and sometimes also of the Abdomen: There is likewise greater danger of Suffocation, and a greater Sense of Heaviness in a *Dropsy*, than in an Empyema; because of the greater quantity of Humours: Moreover there are, or have been Signs of Obstructions, or of watery or serous Blood: Sometimes there is a Cough, because of the saline Serum irritating the *Bronchia*: Upon all which *Risorius* says, that sometimes comes a Pain of the Arm and Shoulder, nay a Palsy; which, if it happens, proceeds from the Serum that penetrates those Parts, or vellicates, stops, and oppresses the Nerves that serve them.

The Prognostication must be always bad in this Distemper, nay worse than in an *Ascites*; because the affected Cavity, as containing the vital Parts, is more noble; and it is to be fear'd, that the Heart and Lungs may be interrupted in their Offices, and so a Suffocation or Syncope follow: Add, that in this Distemper the natural heat is much extinct; the Strength low, the Blood very much vitiated in its mixture, the Viscera are weak, and the Evacuation of the Water difficult: All which, especially when the Distemper is inveterate, take away the hopes of Recovery; wherefore, if Remedies can do any good in this Distemper, it must be done in the beginning; the Cure you may find in the Description of the three kinds of the *Dropsy*.

#### N O T E.

' The Paracentesis is perform'd for the same reason,  
' whether it be to evacuate Matter or Serum, gather'd  
' within the Breast; but in these two Distempers it is  
' done

done with different Success ; for in the first, where there is an Empyema, if it be done seasonably, and perform'd as it ought, it most commonly cures the Patients ; but in a *Dropsy* of the Breast, tho' the Operation be done never so artfully, they all Die, and that in a few Days ; and the Examples of Patients cured by this Remedy, are very rare, and less to be met with, than the Examples of the Ascites cured the same way, though it is counted a singular Performance in Physick.

I never saw any Matter voided by Urine in an Ulcer of the Lungs ; yet I can affirm, that some that had a *Dropsy* of the Breast, by opening small watery Ulcers in the Legs, have breathed more freely, nay laying backward, and without any difficulty, which would be impossible, unless the greatest part of the Serum gather'd in the Breast, was reforc'd in the Vessels ; yet this most commonly gives but ease for a time,

## C H A P. XXI.

*Of an Hemophthisis, or spitting of Blood.*

**H***emophthisis*, or the spitting of Blood generally taken; and from its Etymology, signifies a voiding of Blood at the Mouth, from what part soever it proceeds; yet when Physicians treat of it simply, they only understand that voiding of Blood at the Mouth by it, which without Inflammation proceeds from the Lungs, or the Wind-pipe; and in this Sense, as being a Distemper of the Breast, we only consider it. The Blood, that is voided at the Mouth, cannot come, but from Blood-Vessels, that are bursten, corroded, or open'd, that is, either by a *Rexu*, *Diabrosis*, or *Anatomosis* of the Vessels.

For the *Diapedesis*, or Transudation of the Blood through the Tunicks, of the Ancients, is impossible to be conceived; nay, even the *Anastomosis*, or the opening of the Extremities of the Vessels, from the quantity, or effervescency of the Blood, is very seldom the Cause of the spitting of Blood, and happens only in those where this Distemper, without doing harm, comes from a Suppression of the Piles, or *Menstrua*; the Rupture then, and Corrosion of the Veins and Arteries, are the only most frequent Cause of the *Hemoptoe*: Upon which the Blood jumps out into the *Bronchia* of the Lungs; and thence, by more or less straining, that is, Expectoration, with the Air strongly breathed out, it is thrown up, and mix'd with the Spittle, according as the bursten, or corroded Vessel is bigger or lesser; or as the *Bronchia*, in which the Blood is shed, are bigger or lesser; that is, more or less distant from the main Body of the Wind-pipe: The Vessels in the Lungs, or Wind-pipe, are broke, by the excessive quantity of the Blood; as also by distending the Vessels too much by its Swelling: Likewise by a Wound, a Blow, a straining of the Voice, the carrying of too much weight, and other

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Strain-



Strainings, and violent Exercises of the Body ; in which, because the Lungs are very much shaken, and agitated, or its little Bladders too much distended by the Air they contain, there happens a Rupture in the Vessels of the Lungs. The same Vessels are corroded by Humours that are sharp, and too full of Salts, not falling from the Head on the Lungs, by the way of a Catarrh, as the Ancients would have it ; for there is no Passage into the Lungs from the Head, nor any other Parts ; but furnished from the Arteries, dispersed through the Substance of the Lungs, and lying down sometimes in the Wind-pipe, sometimes in the little Bladders ; where, with their very corrosive Virtue, they eat and corrode those Parts ; whence comes the Effusion of the Blood, and its Evacuation with the Spittle. The same Corrosion may be made by Matter gather'd in the Lungs ; but then it is rather a Phthisick, or Peripneumony, than an *Hemoptoe*. There is no need for relating here, the Causes, that produce this Acrimony of the Humours, and make the Swelling, and quantity of the Blood ; for they may be easily gather'd from the bad use of the Six unnatural Things ; as sharp, salt, hot Food, Watchings, and diverse Alterations of the Air, and Passions of the Mind.

To establish a Diagnosis of this Distemper, we must not, with the Ancients, look for the *Pars mandans*, or the part that sends the Humours ; for there is no other besides the Heart ; but whether the Blood comes from the Wind-pipe, the Lungs, Throat, or Stomach, is known by the various way of spitting of it ; when it proceeds from the Lungs, the Blood is only brought up by Coughing, and not without straining to expectorate ; but when it comes from the Wind-pipe, it is voided by Expectoration, yet, with less difficulty : The Blood that proceeds from the Stomach is not thrown up by Coughing, or violent Expectoration ; but simply by Vomiting ; which is easily known, by the very great Inversion, and Contraction of the Stomach : When the Blood flows from the Throat, Teeth, Palate, or Nostrils ; it is known by being only spitted out ; or by that it is evacuated by only spitting. To say nothing of the

the other Signs, that indicate the opening of the Vessels in those Parts ; as bleeding at the Nose gone before, &c. Besides, in an *Hemoptisis* there are other Signs that shew, that the Lungs, or Wind-pipe are affected ; as when the Blood looks frothy, and of a lively Colour ; because of the mixture of the Air ; when it is attended with a Cough, it is deduced from the Acrimony of the Blood, that vellicates the outward part of the *Bronchia*. Lastly, when there is a fixed and lasting Pain in the Region of the Breast, caused by a *Solutio continui* ; as also a Hoarsness, proceeding from the sharp Blood, that exasperates the Wind-pipe ; if the abundance of Humours, Straining, Exercise, a Blow, Wound, or immoderate Effervescency, have brought this Distemper, by a Rupture of the Vessels ; it may be known without any labour, or be manifest from the Relation of the Patient. But if the Acrimony of the Humours be the Cause of the spitting of Blood, it shall be known by the absence of the other Causes, as well as the spare Constitution, and thin Looks of the Patient ; and likewise by the Causes gone before, that furnish the Blood with Acrimony.

As to the Prognosis, this Distemper is very dangerous ; especially, if the Vessel, that is bursten, or corroded, be great and considerable ; whence *Hippocrates*, not without reason says ; it is an ill Sign to have Blood brought out upward, which is to be understood of the Breast ; the same adds also, after spitting of Blood follows the spitting of Matter, after that a Consumption, and then Death ; for spitting of Blood most commonly turns to a Phthisick.

An *Hemoptoe* is cured by often repeated Phlebotomies ; especially, when there is a Plerhora, and swelling of the Blood ; first in the Arm, and afterwards in the Ankle : Cupping, Frictions, and Ligatures, are not approved of by the modern Physicians. After the Bleeding, prescribe cooling and adstringent Juleps of Plantain or Rose-water, or an adstringent Decoction of Sal Prunel, Syrup of dry'd Roses, with Coral, Pearl, Troches of Bole-armoniack, or Seal-earth, Dragon's-blood ; or you may make an adstringent Opiate of the same, with the Conserves

of Comfrey, Roses, or Sweet-briar ; the Juice of Quinces, Milfoil, Purslain, Plantain, and Nettles in Broth, or a Julep : You may mix with it Troches of Scarabe, or its Chymical Oyl, which is also recommended : The Syrup of Comfrey, of Fernelius, and the Tincture of Coral ; the Waters against spitting of Blood of Quercetarius, the Description of which is in *Riverius*. Lohochs must likewise be prescribed, that the Patients may expectorate the easier, and so the Distemper be less exasperated ; of Syrup of Violets, Mirtles, and white Poppies, or the Juice of Purslain, with Sugar and Starch, made without Lime. *Platerus* praises the Troches of Alkekengi with Opium, given in Milk. *Trallianus* recommends the *Lapis Hematites* : *Antonius Valerius* the adstringent Powder of red Roses, Bole-armoniack, Seal-earth, and other things above-mentioned : In the mean time, Glisters first, emollient, and then cooling, must be injected ; especially if the Body be bound. A Purge may be prescribed of Cassia, Manna, Tamarinds, Rhubarb, Mirabolans, Syrup of Sycory, in an adstringent and cooling Decoction. Bathing is proper in this Distemper ; especially in the Acrimony of the Humours : As also Emulsions, Narcoticks, Laudanum, Milk ; a thickening Diet, all things made with Rice and Almonds ; a Decoction of the Extremities of Animals. For an ordinary Drink, prescribe the Decoction of Comfrey-roots, and Milfoil-leaves : An hot Iron applied to the Arm, or Shin, prevents this Distemper.

## N O T E.

‘ In spitting of Blood, the Root of Clotbur is a Specifick : The Seed of Nettles does the same, which I attribute to its Viscidity. *Germander* is recommended by *Crato*, but it being so very bitter, it may seem too sharp and detergent. Some praise Mouse-turds, half a Dram or two Scruples being given in Plantain-juice and Sugar. Unripe Quinces cut in-slices and boyled, are of great use, their Juice and Decoction being sweetned with Sugar-candy, and a Spoonful of it given often ; or they hollow out a Quince, and fill it with Sugar, and a  
Dram

• Dram of Frankincense powder'd, and so eat it. They  
 • praise likewise white Daisies, and red Poppies, whose  
 • Tincture extracted with boyling Water, and a little  
 • Spirit of Vitriol or Sulphur, is given with a little Sugar  
 • for their ordinary Drink ; Barley-broth with Raisins is  
 • likewise very proper ; the vulnerary Herbs about Ge-  
 • neva are of great use, as Winter-green, Sanicle, Ladies  
 • Mantle, wild Betony, Liverwort, Periwinkle, &c.

• It is likewise proper to add Sugar of Lead in a small  
 • quantity, to the Juleps or Opiats that are used : They  
 • praise also Japan-earth, the true Dragon's Blood, Mum-  
 • my, Gum-arabick, Mastick, Frankincense, Myrrh, Sal-  
 • prunel, &c. Gentle Purges, if the Superfluity of Serum  
 makes the Blood too fluid, may be often administred.

## C H A P. XXII.

### *Of the Phthisick.*

**T**HE *Phthisick* only signifies an Emaciation, and wast-  
 ing of the Body ; yet the Physicians use it by excel-  
 lency, for that Leanness and Consumption that follows  
 upon an Ulcer, or scirrhus Constitution of the Lungs ;  
 I add a scirrhus Constitution of the Lungs, because the  
*Phthisick* depends not alone upon an Ulcer of the Lungs,  
 but most commonly also upon, as it appears by the Dis-  
 sections of those that dye of it, scirrhus Swellings, and  
 little Stones bred in the Lungs, by which the same by  
 degrees are dry'd and diminished. There is another Dis-  
 temper which comes near this, which the Authors call  
*Tuberculosus*, in which also the whole Body is emaciated ;  
 but because it proceeds not from an Ulcer, or scirrhus  
 Constitution of the Lungs, but rather from an immoderate  
 and often repeated Effusion of Sperme, or a Stoppage and  
 Obstruction of the Spinal Marrow ; I will not here con-  
 found it with the *Phthisick*, as requiring a different Cure.  
 Its different Nature and Causes, with that of the *Phthisick*,  
 may be seen in *Riverius*, where he proposes likewise other  
 sorts of the Consumption, not belonging to the Distemper  
 of which we treat.

The



The Ulcer then which makes the *Phthifick*, has no other Causes, than those which in the Hemoptifis we said were able to burft or corrode the Vessels, and which it would be uselefs here to repeat ; for an Ulcer, in what part of the Body soever, can but be produced these two ways ; and this is the reason why an *Hemoptoe* turns to a *Phthifick* most commonly, or else a Peripneumony ; in which the Blood extravasated, and not evacuated, suppurates at last, and turns to an Ulcer in the Lungs.

A Vomica also of the Lungs, which is nothing else but a Collection of Matter in some little Bladder of the Lungs, ends in an Ulcer and *Phthifick*, when it breaks : This Vomica often skulks for a great while in the Lungs without doing harm ; and commonly, when the Imposthume breaks, the Patient is suffocated, or at least an Ulcer is made.

The external Causes, that dispose the Body to such an Ulcer, are ; First, an Infection, or the Effluvia, sent forth from such an Ulcer, which by breathing outward are voided with the Air ; which, if it be drawn in by another that lies or talks with the Phthifical Person, produces the same Distemper in him ; because those Exhalations are corrosive and infectious ; especially among near Relations, as Brothers, Sisters, &c. because their Constitutions of Humours and Lungs are not very different ; a certain Constitution of Air, as its being too hot, or too thick, or unequal ; that is, sometimes hot, and sometimes cold ; may also dispose to the *Phthifick* from an Ulcer ; and that because the Blood, for want of Nitro-aereous Particles, is either not attenuated or animated ; whence spoil'd in its mixture, it sticks in the Lungs, or grows sharper, and so produces an Ulcer. Lastly, all the Six unnatural Things, that are able to furnish the Blood with Acrimony, or to promote its Extravasation in the Lungs, are to be reckon'd among the Causes of the *Phthifick* ; all which Causes have more effect in Subjects that are disposed, that is, in those that have an hereditary Inclination to this Distemper ; or that have a narrow Breast, and broad Shoulders that stick out ; a long Neck, and a thin Body.

The other Species of the *Phthifick*, which we said proceeds from a scirrhus Constitution of the Lungs, is not  
owing

owing to sharp Humours for its internal Cause ; but is produced from gross, viscous, and glewish Humours ; Blood that's full of viscous Lympha, which is apt to raise hard and scirrhus Swellings in the Lungs.

But the external Causes of it, are all those things that are able to give the Blood a thickness and viscidiry, which we have named in the foregoing Distempers.

The Signs of the *Phthisick* are a Cough, salt, sharp, nay bloody, and in time mattery Spittle ; pale Looks, with red Cheeks ; a slow Fever, commonly increasing at Night, Pain in the Breast, Emaciation of the Body, a stinking Breath, nocturnal Sweats ; to all which may be added a youthful Age, which is proner to the *Phthisick*, than an old or childish Age ; an ill-shaped Breast, an hereditary Disposition ; but if these Symptoms be more intense, and accompanied with others, that are worse, they shall be Signs of a confirm'd *Phthisick* ; if there be a Loosness, a difficult Respiration, hippocratick Looks, &c. yet the *Diagnosis* will be more certain, if spitting of Blood, or a Peripneumony of long standing are gone before : In the third Species of the *Phthisick*, which takes its Rise from little Stones, with which the Lungs are fill'd, by reason of which they dry and waste away, there are not all the above-mentioned Signs, nor are they quite the same ; in the Lungs, it is true, there is an heaviness, but no Pain ; a Cough, but no spitting of Blood, or Matter ; an Emaciation of the Body, difficult Breathing, a slow Fever, pale Looks, with red Cheeks ; but no stinking Breath ; nay, this Distemper is not so contagious.

The Prognosis of the *Phthisick* is comprehended in two Lines ; for if it be beginning it is dangerous, and not easily cured ; but if it be confirm'd, and proceeds from an hereditary Disposition, it is incurable, and mortal.

The Cure of the *Phthisick*, proceeding from an Ulcer, is performed with lenitive, detergent, and consolidating Medicines, such as Potions of vulnerary Herbs, Turpentine taken ; Flower, and the Magistery of Sulphur ; Balsam of Peru, or of Sulphur therebintinated ; the Juice of Ground-Ivy, sweetned with Sugar ; Mead, a Decoction of Barley, with Liquorice and Raisins ; Flowers of St. John's Wort, Syrup of Comfrey, Conserve,

serve, and Sugar of Roses ; a sudorifick Decoction of Guajacum, Lentiscus, Sarsa-paril, and raw Antimony continued for some Days ; a Decoction of Sanders, diaphoretick Antimony, Fumigations of Frankincense and Mastick ; Bathing, Milk, and especially that of Asses, taken for some Days ; Emulsions, Narcoticks ; as Laudanum, a Decoction of the Extremities of Animals ; all things made with Rice, Almonds, and Oats ; restorative Broths, to restore the emaciated Body ; very good Meats, and Victuals of an easy Digestion, shunning always things that are pepper'd, and salt ; change of Air ; in a word, all what we have prescribed heretofore, in the Acrimony of Humours, or internal Ulcers ; as also in the Cure of spitting of Blood, which must be all prescribed in their Order, according as the Physician shall think fit ; intermixing them with Purgatives, and now and then Lenitives of Manna, Cassia, Rhubarb, Tamarinds, Syrup of Succory, with Rhubarb, avoiding those things that are too strong ; and even Senna, which is said to be hurtful to the Breast : Glisters, both purging and cooling, are to be injected now and then, to wash away the Filth out of the first Passages : As for Bleeding, it seems not required here.

### N O T E.

‘ If Phthical People mend not after the use of Milk,  
 ‘ and especially Asses Milk, all other Remedies are  
 ‘ commonly given in vain ; else they recommend di-  
 ‘ still'd Milk-Water, the Powder of Haly ; to which  
 ‘ may be added Coral, Pearl, Crabs Eyes ; and above  
 ‘ all, the Anti-hectick Powder of Potenus, made of Re-  
 ‘ gulus of Martial Antimony with Tin. I have seen  
 ‘ likewise, the vulnerary Herbs about Geneva used with  
 ‘ Success : See the Notes of the foregoing Chapter :  
 ‘ These Herbs small shred, must be infused in boyl-  
 ‘ ing Water, and two or three Glasses of the strained  
 ‘ Liquor sweeten'd with Sugar, given twice a Day for  
 ‘ several Months.

: Viper.

‘ Viper Broth is also very useful here ; for the viscus  
‘ Flesh of these Animals, whose Spirits fly not easily away,  
‘ yield Broths that are very nourishing, and whose Parts  
‘ take off by degrees the Acrimony of the Sharper  
‘ Salts.

‘ Phthifical People cannot bear immoderate, or fre-  
‘ quent Evacuations: The taking four Ounces of Blood, or  
‘ five at the most, repeated three or four times a Year  
‘ does no hurt, but is beneficial: but Purges are seldom  
‘ to be ordered, that the Juices may not be provoked, and  
‘ by them a Loosness, which is commonly fatal in this Dis-  
‘ temper: If there be a necessity of Purging, you may  
‘ hardly give any thing stronger than *Cassia* and *Manna*.  
‘ The use of the *Jesuit's Bark* is much recommended, in  
‘ this Distemper, by a late Learned *English* Author *Morton*,  
‘ whom consult by all means about the Nature and Rem-  
‘ dies of this Disease.

## C H A P. XXIII.

### *Of a Pleurisy and Peripneumony.*

**T**H<sup>O</sup> a *Pleurisy* and *Peripneumony* by the Ancients  
have been thought to be two distinct Distempers  
of two different Seats, the one possessing the Lungs, the  
other the *Pleura*; so that one might exist without the o-  
ther: yet induced by some Reasons, as well as relying on  
the Ocular Testimony and Authority of eminent Physi-  
cians, I shall treat both these Distempers as almost one  
and the same. I am of Opinion, that the *Pleurisy*, if  
I may use the same Name, very seldom, and hardly ever  
invades the Membrane that invirons the Ribs, but only  
the superficial and external Substance of the Lungs; and  
that the *Peripneumony* is, when the same Inflammation in-  
vades the inner Substance of the Lungs, or the inner Sur-  
face of the Lobes of the Lungs.

They are no slight Reasons, that have compelled me to  
leave the Opinion of the Ancients in this thing; tho’ I be-  
lieve, that it is also possible, without a Miracle, that the  
*Pleura* may be inflamed, if very hot and scalding Blood  
rushes copiously into it; yet this Membrane is so thick,

**T**

and



and naturally so void of Blood, that it is hardly to be believed, that the innumerable *Pleurisies* that are observed every Year, and especially in the Winter, should proceed from thence; nay, it is more likely, that the Lungs, as being a loose Substance, and more furnished with Blood, should be always principally affected, but the *Pleura* very seldom; And this Hypothesis shall seem so much the more congruous, as it shall more readily explain the Bloody Spittle, which almost always follows in a *Pleurisy*, as well as *Peripneumony*; and the Cough, which is the Symptom of both the Distempers: For tho' the Ancients, labouring to explain the first Symptom, viz. *The Spitting of Blood*, thought that it was by a Transudation of the Blood from the *Pleura* to the Lungs, and from them to the *Bronchia*; yet this Reason is so frail, and so contrary to Anatomy, that it almost falls of it self; for how is it credible, that the Blood, which is of a thick Consistence, should penetrate such thick Membranes as the *Pleura*, and that which clothes the Lungs; when in a *Dropsie* of the Breast, the Water and Serum, which are much thinner, and almost fills the whole Cavity of the *Thorax*, are never evacuated by an *Anacatharsis*, or Spitting? But, how the Cough can be produced from the inflamed *Pleura*, I can no ways see; for, tho' the Humours, producing the Inflammation, are sharp and vesiculating, they can but produce Pain and Stitches in the Side, and not a Cough, which as *Anatomy* Teaches us, proceeds only from the Provocation of the Fibres of the *Bronchia*.

That sometimes in the Corps of the Defunct the *Pleura* is found inflamed, nay torn, proceeds from no other Cause, than that the Lungs outwardly inflamed, because in every Inspiration they touch the *Pleura*, communicate their Heat, and Inflammation to it; nay, sometimes fasten themselves to it, by the help of a viscid Serum, that for want of Circulation, gets through the external Membrane of the Lungs; this makes a certain Glue, as it were; by which the *Pleura* and Lungs are closely joyn'd together; which happens in a *Pleurisy*, *Peripneumony*, *Phthisick*, and other Distempers of the Lungs, where the Blood being viscid and clammy, deprived of a free passage from the Lungs, the thinnest Particles are forced to sweat thence; which afterwards, either by their staying or the heat, made thick, joyn the Lungs

Lungs with the *Pleura* : Though this Sticking together is either sometimes Natural (as some would have it) or always takes its rise from some Distemper ; As for my part, I am of Opinion, under correction of better Judgment, that this Sticking together is always the Off-spring of some Distemper or bad Constitution, and that it is never the Work of Nature : for, besides that it is not likely, that Nature should intend so firm a Conjunction, where she allows the Ribs and Lungs, each a peculiar and distinct Membrane ; if it was Natural, it would occur much oftner, which yet happens not ; for we see, that the Bodies of innumerable and various Animals, when open'd, have not this Sticking together of the Lungs with the *Pleura* ; which is a great Argument, that Man, whose vital Parts are altogether like those of other Animals, has not this Conjunction of the Membranes from Nature. That sometimes this Adhesion is found in the Bodies of some Men, or other Animals, proceeds, I should think, either from the Distemper, of which they Died ; or if they suffer'd a violent and sudden Death, and this Adhesion is found, it may be suspected, that it took its Birth from some Distemper that went before ; whence it is no wonder, if in all those, that Die of any Distemper of the Breast and Lungs whatsoever, as *Phthisick*, *Peripneumony*, *Pleurisy*, *Empyema*, *Asthma*, &c. the Lungs are fastened to the *Pleura*, for the aforesaid Reasons ; which we seldom see in other Distempers of other Parts, in which the Lungs have no share. From what is said, it is manifest, what a *Pleurisy* and *Peripneumony* are ; The first is nothing else, but an Inflammation of the superficial Substance, or the outward Membrane of the Lungs : And the other is an Inflammation of the inner Substance of the Lungs, or the internal Surface of their Lobes. The joyn'd Cause of this Inflammation, as well as that of many other Parts, is commonly nothing else, but viscous and clammy Blood ; that is, such as is overcharged with *Lympha* : For a *Lympha*, that exposed to the Fire, nay, even to the cold Air, becomes clammy, and coagulates, is very apt to give the Blood a Gleewhiness, and Viscidity ; which makes, that the Blood, because of its Clamminess, not able to pass through the *Pneumonick* capillary Vessels, Stays, and Stagnates in the same ; whence a Putrefaction, and preternatural Fermentation must necessarily follow ; because the Principles,

ples, that by the Motion of the circulating Blood were kept mix'd together, now by reason of their Rest, and Stay are exalted, and disunited; whence the Spirits, and thinner Sulphur flying away, the grosser Sulphureous Particles must of necessity be dissolved; and consequently a white Matter be made: wherefore, after an Inflammation a Suppuration most commonly follows. The Blood drawn out of a Vein of a *Pleuritick*, or *Peripneumonick* Patient is a great Argument of this Truth; for it is so Gummy, Viscous, and Lymphatick; that besides the great Whiteness it has, it sticks like Glue to the Vessels, and lets not a drop of Serum fall from it, which is a sign, that both Distempers proceed more from a Gluishness, and Viscidity, than any other ill Disposition of the Blood.

This Truth will yet more fully appear, if we consider both the Causes, that use to produce these Distempers, and the Symptoms that are the Diagnosticks of them: For they all prove rather a Thickness, and Viscidity of the Blood, than its Dissolution, or any other bad Constitution. First, among the most common Causes, the Coldness of the Air, and the Winter Season, Drink cooled with Ice are used to bring *Pleurisies* and *Peripneumonies*; wherefore they are more brief in cold Countries, than elsewhere: The Reason of it is, that all the retriggerant Causes work almost the same way, coagulate the Blood, and *Lympha*; because of the sudorifick Parts, with which they are fill'd, and render the one unfit to circulate through the pueumonick Vessels; whence it necessarily follows, that it must stay there, and produce an Inflammation. For if these Distempers proceeded from Blood, that is in too great a ferment, not clammy, or viscous, but very much heated, they would be observed in burning Fevers, and that time of the Year, in which the Blood burns most, and circulates the quickest through the Lungs, and the whole Circumference of the Body: yet in a burning Fever the Blood passes very well through the capillary Vessels of the Lungs; and *Pleurisies* and *Peripneumonies* are rarely seen in the Summer: but when the Frosty Winter Colds come on, and the North Winds begin to blow; then the Air overcharged with cooling and nitrous Particles, and come to the *Bronchia* of the Lungs, coagulates, retards, and thickens the Blood, on which it works immediately, and

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as it were by touching; whence it is forced to stagnate in its Vessels, and to cause an Inflammation: Immoderate Exercises also, if afterwards the Body be exposed to the cold Air, are able to produce both these Distempers; for as much as the Blood then heated, and copiously brought into the Lungs, (because of the Contractions of the Muscles from the Exercise, and consequently a squeezing of the Vessels all over) is, when it is, as it were, boiling in the Vessels of the Lungs suddenly made cold, by the cold Air, that's drawn in; and consequently soon, and efficaciously congealed: as it appears by an example of *Limonade*; which, if it be poured hot into a Glass, that is surrounded with *Salt Peter* and Ice, is soon frozen: Which Effect, if we will Philosophically examine, we shall find, that the Pores of the Liquor being dilated by the Rarefaction and Ebullition; the nitrous, and cooling Particles, may easily, and copiously enter, and consequently soon, and easily hinder its Motion, and settle it in a very great degree of Rest, in which Cold consists: Or we might say likewise, that, since all Bodies lose as much of their own Motion, as they communicate to others, the aforesaid Liquor, as also the Blood, being in a very great Motion and Heat, and meeting with other Bodies, that hardly have any Motion at all, as the Cold Air and Ice, lose their Motion, by communicating their own, for the greatest part, to the said Bodies, that are so difficult to be moved.

The Ancients divided the *Pleurisy* into Spurious and Legitimate, which Division, I think, ought to be retained; because it may sometimes happen, that the same Blood, that causes an Inflammation in the inner or outward Substance of the Lungs, be from a Cold outwardly taken, or other cause stopt in the internal, as well as external *Musculi intercostales*, and there raises an Inflammation; this will produce a spurious *Pleurisy*; a species which *Willis* relates, that had neither Fever, nor Inflammation; but is produced from Wind, or sharp Serum gathered in the Side, and vellicating the Membranes and Nerves, that are there.

A *Pleurisy* and *Peripneumony* are used sometimes to be Epidemick, and to invade all in general; which wholly depends upon a peculiar Constitution of the Air, and some Particles, that fly in it, whose Figure, tho' no body can easily



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sily determine; yet we know by the Event, that they are of very great Force, to fix the Blood in the Lungs, and make it, from fluid, viscous: Suppose that they are nitrous Bodies, which being sometimes very Cold, the Blood, even of the best Constitutions, cannot resist their Action, when it is in a high degree of Cooling; whence it is no wonder, that it invades all, without Distinction.

As the *Pleurisy* and *Peripneumony* are used to invade the same Part, viz. the LUNGS, so they have almost the same Signs and Symptoms: And first, the Difficulty of Breathing is a Companion of both; because the Lungs, stuff'd up with Blood that is viscous, and circulates not easily through the pneumonick Vessels, cannot receive a sufficient Quantity of Air in their little Bladders.

Yet it is to be observed, that the Respiration in the *Pleurisy* is more Painful, than in the *Peripneumony*, because of the touching of the Lungs against the *Pleura*; which makes that the Tumour and Inflammation, being on the outer Surface of the Lungs, is squeezed and exasperated, which cannot be said of the *Peripneumony*, where the Inflammation is in the inner Substance of the Lungs; yet there the Respiration is more difficult, because the Inflammation is greater, and internal. There is also in both the Distempers, a difficult and laborious Breathing, especially in the Beginning of the Distemper, which how manifest a sign it is of viscous Blood and *Lympha*, I leave you to judge. The Phlegm also, brought up with Pains, is stained with Blood; because of the *Solutio continui*, and Extravasation of the Blood; which makes, that since the Phlegm cannot be expectorated, but with some force, the Blood scatter'd through the Circumference of the Lungs gets out, and by help of the Breathing outward comes up by degrees with the Phlegm, and is voided. If the Inflammation, that is made, suppurates, the Phlegm turns yellow, and mattery. The Pain is common to a *Pleurisy* and *Peripneumony*, because of the *Solutio continui* and the Distension; yet with this difference, that the one is Pricking, and felt in the Side; because the Membrane, which invests the Lungs, is affected; which is of more exquisite feeling, and turns more toward the Side; and here the Pain is stretch'd out, sometimes toward

ward the Throat, and sometimes Lower, according as the Inflammation is High or Low. But in a *Peripneumony* the Pain is obtuse and lies deep, because the internal vesicular Substance of the Lungs, which is of less exquisite feeling, because of its Loose Contexture, is the Seat of the Distemper.

The Cough is likewise observed in both Distempers, as a Diagnostick Sign, which is a great Argument; that the Lungs, and not the *Pleura* are affected in both; for the Cough cannot be caused by any other means, than the serous Humours, because of the Circulation of the Blood being hinder'd, Distill'd into the Wind-pipe and its Branches; which because they are loaden with Salts, that are only dissolved in Water, provoke, and vellicate the Fibres of these parts, which makes the Cough.

The Ancients said, that in a *Pleurisy* there was a hard, and sawing Pulse; because of the Hardness, and Thickness of the affected Membrane; and in a *Peripneumony* a smooth, and *undose* one: But all these differences of the Pulse; as *undose*, sawing, *vermicular*, *indyrus* &c. are mere fables; at least, if there be such, they could never be found by the most Sagacious, which made *John Saptus Montanus* say, with abundance of reason, that they were all Impostors, that pretended to know more than six Differences of the Pulse, for there are really no more than Six. Great and little, quick and slow, frequent and rare, equal and unequal, violent and weak, full and empty. We say then that the Pulse in a *Pleurisy* and *Peripneumony* is the same; but that in a *Pleurisy* it is a little more equal, because the Circulation of the Blood is easier there, than in a *Peripneumony*; in which, because the inner Substance of the Lungs is stuffed up, the Blood goes not through the Heart by equal Pulsations, nor circulates so fast: Whence it must follow, that the Pulse is more Slow, and sometimes unequal, nay intermittent.

In both Distempers there is a Redness of the Cheeks, which is not so intense in a *Pleurisy*, as it is in a *Peripneumony*; the Reason of which is, that the Blood, descending from the Brain through the Veins, since it can not easily pass from the right Ventricle of the Heart into the left, because that great Road through which it

used to pass is stopt, reſtagnates and regurgitates in a manner in the upper Parts, and colours chiefly the Cheeks, where the Veſſels and Pores are large, and the Contexture Loofe.

From the Hypotheſis we raiſed, *viz.* the Thickneſs and Viſcidty of the Blood, it ſeems Difficult to deduce the *Fever*; becauſe, if the Blood be thick and viſcous, it ſeems unfit for Fermentation: But if we conſider the thing more Seriously, we ſhall ſee, that Gleuiſh and Viſcous Liquors, ſuch as *Oyl*, *Pitch*, *Rofin*, and the like, are not free from Fermentation, tho' they require a ſtronger Ferment. Juſt ſo it is with the Blood in theſe Diſtempers, which contains within it a Ferment; *viz.* the Heterogeneous Particles, gathered from the Abufe of the ſix unnatural things; which *Heterogeneous* Particles, tho' they can not ſufficiently Stir the Blood to cauſe a quick and frequent Pulse, move it yet Sufficiently to cauſe a preternatural Pulse; *viz.* a great, and Violent, and ſometimes an unequal one. To which work contrlbutes not a little, nay the whole, the Violent *Syſtole* of the Heart, which proceeds from the Blood, becauſe of its Viſcidty, ſtaying a little longer in the Ventracles of the Heart; for by the Stay of the Blood in the Heart, the Muſcles of it are not only more copiouſly Furniſhed with the Elaſtick *Copula*, which comes from the Blood; whence the Fermentation with the Spirits is increaſed, and conſequently the Pulse made more Violent; but this Elaſtick Virtue is alſo not ſo eaſily diſſipated, becauſe theſe Elaſtick Particles have ſtill a Smack of the Nature of the *Gummy* and Viſcous Blood, from which they come; and hence the Fermentation, or Exploſion, which they make with the Spirits, is of greater Duration; which makes, that the Heart alſo remains longer Contracted: And ſo the ſlowneſs of the Pulse, in which the *Pleurify* and *Peripneumony* agree, is cauſed in the Manner aforeſaid.

But it is thought that the *Fever*, which is obſerved in a *Pleurify* and *Peripneumony* is ſometimes Symptomatick, that is following upon the Inflammation and *Fluxing* in the Breſt; for as much as ſome Particles and *Eſſuvia*, exhaled from the Extravaſated and *Fermenting* Blood, are communicated to the Blood, that continu-  
ally

ally circulates in the Lungs, which afterwards by their *Heterogeneity* Stir the Mass of Blood up to a Preternatural Fermentation. Sometimes this *Fever* is thought to be Essential, and to precede the *Fluxion*, and Inflammation; for as much as the Blood by these Procatarrick, and external Causes, or also by the *Heterogeneous* Particles lodging and skulking in the Mass, is raised to a *Febrile* fury; rushes Copiously into the loose Composure of the Lungs, and there by the concurrence of the other Causes, as the Coldness of the Air and its own Viscidity, produces an Inflammation.

But howsoever it be I am of Opinion, that the *Fever* in these Distempers is most commonly Symptomack, and following the Inflammation; tho' no Body can deny, but that sometimes, tho' rarely, it is Essential: for since the most frequent Causes of these Distempers are Cooling, and, as it were Fixing the Blood in the Lungs, it is necessary that the Blood be first stopt, and extravasated in the Lungs, before the *Fever*, which proceeds from it, can be Produced: and this agrees very well with Experience; because the greatest part of *Pleuritick* and *Peripneumonick* Patients complain of the Difficulty of Breathing, and the Pain in the Side, before ever any Notable Alteration can be felt in the Pulse: besides that an Essential *Fever*, proceeding from Procatarrick Causes, as *Heterogeneous* Particles mixed with the Blood, could not produce by it self a *Pleurisy*, or *Peripneumony*, unless, as we said before, other Causes, as the Loosness of the Lungs, and the Glewishness of the Blood from the Air that's drawn in, did also concur. Otherwise *Pleurisies* and *Peripneumonies* would be observed in burning and other Fevers; which yet they are not.

The Signs of a spurious *Pleurisy* are; that there are no Bloody Phlegms, no Cough, a less, nay no *Fever*; if it proceeds from a sharp Humour in the Side, it may outwardly be felt, and seen: All which is manifest from what has been said. The manner of lying Down of the Patient was much Look'd upon among the Ancients; as shewing which was the affected side, and consequently in which Arm they were to bleed; but is not thought of such moment now, since without Distinction we bleed



in the affected and not affected Side : but the Manner of Lying down ought otherways to be Judged off than the Ancients did ; for they thought ; that the Side, on which the Patient lay easy, was always the affected Side ; but that the other, on which they could not lie, but with Difficulty, was free : But how much they err'd, is manifest from the Reason on which they relied, viz. that the *Pleura* was affected : Which is none at all ; As appears by what has been said : And tho' the Inflammation was in that Part, would not the Pain be exasperated, rather than mitigated, if they lay on the affected Part ? Because the Weight of the Lungs would squeeze the affected Membrane and make a greater Distension of the Part : Which by a contrary reason would happen if the Patient lay on the sound Side. We must therefore say, that since the *Pleurisy* has its Seat in the external Substance and the Membrane of the Lungs, it is so far from it, that the Patient would lie more easy on the affected Side, that it would rather torture him the more : For this way the inflamed Swelling is Squeezed by its own Weight, the Lungs ; and the Pain is much augmented by the Hardness of the Ribs, that touch it, which happens not when the Patient lies on the sound Side ; because then the Lungs are no ways Squeezed : but if it seems useful to know which Side is affected, it is very much manifested by the Pain, which shews it self either in the right or left Side.

As to the Prognosis ; the *Pleurisy* and *Peripneumony* are both dangerous : for since many die of these Distempers, and many also recover from them, they are neither to be called Mortal, nor void of Danger ; but they are to be counted of an uncertain Event. A good Habit of Body, Strength, Youth, and a robust Temperament give some hopes of Recovery ; but their Absence portends certain Death.

Some manage the Cure of these Distempers with almost nothing but frequent Bleeding : Others again think that *Phlebotomy* ought to be shun'd worse than the *Plague* : Among these is *Sylvius* ; who, being ill himself of a *Peripneumony*, would rather his Soul (pardon the Expression) should be drown'd in his Blood, than that the least drop of it should be taken from him ; but he forbids

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forbids not only Bleeding, for as much as it can no ways correct the Glewishness and Viscidity of the Blood; but moreover, instead of acid, and cooling Remedies he makes use of very potent Diaphoreticks; but the middle Way is the safest: Reason, and Experience have taught us to follow the Method neither of the first, nor of that Modern. I value *Plato*, and love *Aristotle*, yet Health is worth more than they, and I am for making the best of each Party.

Concerning Bleeding: I am of Opinion, that it is by no means to be omitted in these Distempers; but that it is rather to be performed copiously and often: For thus, you keep the Blood from extravasating so easily; and being made clammy, and viscous it circulates the more freely; because it has more Room: Besides Phlebotomy prepares the passage for Purgatives, and Diaphoreticks; which, because they agitate the Blood very much, might, because of the Fulness of the Vessels, cause some *Rupture*: To say nothing of its making a *Revulsion*, and that it Cools the Blood; which in these Distempers is always much heated by the *Fever*, which is always pressing

After Bleeding has been 3, 4, 5, 6 times, or oftner perform'd, yet without Excess, sometimes in the Arm, and sometimes in the Foot, and sometimes 2, or 3, times a day; if the *Fluxion* seems to be Obstinate, prescribe Purging Glysters, that in some manner agitate the Blood, and evacuate the *Heterogeneous* Matters through the first Passages: Every day, and every other day you may prescribe this Glyster: Take of Mallows, the Herb *Mercury*, *Betony*, *Pellitory* each a handful; of the four greater cold Seeds, one Ounce; of *Barley*, of *Flowers of Camomil*, and *Melilot*, each one *Pugillum*: Boyl it to a Pint; and in the strain'd Liquor dissolve of *Catholicum* for the Mouth one Ounce, of *Hira Picra* half an Ounce, of Honey of *Violets* two Ounces; make a Glyster to be given Luke-warm.

The Purging is to be perform'd as soon as there is an Opportunity, and it is better to give it in the beginning, than in the end of the Distemper; yet with this Precaution, that sufficient Bleeding has preceded it. There are Various Forms of Purges, that may be used;

Some

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Some, whilst the strength yet favours, prescribe the vulgar Potion of pick'd *Senna*, *Manna*, *Jalap*, *Solutive Syrup of Roses* in a cooling Decoction: Yet I would rather prescribe half an Ounce of *Senna* in some Broth, with an Ounce of *Manna*, and some Grains of prepared *Sal Armoniack*; for this way you correct the Viscidity of the Blood, and expell what is *Heterogeneous* in it. Tho' *Laudanum* seems suspect to *Willis* in Distempers of the Breath, yet it is of great Utility in a *Pleurisy*, and *Peripneumony*, because it Quells the Watchings, *Deliriums*, and the Pains, if they are pressing; and it promotes Sweat in a manner, which in that case always eases the Patient: Wherefore *Laudanum* most be given either in *Juleps* of the Waters of *Carduus Benedictus*, or *Scabious* with the Syrup of *Maiden Hair*, or in *Emulsions*. Some, whilst the *Fluxion* is renewed, after the Vessels are emptied, prescribe a Vomit: Acid and refrigerant Medicines do more Harm, than good in these Distempers; but *Diaphoreticks*, and *Sudorificks* are very Beneficial: Yet I approve not here of those gross *Diaphoreticks*, that Stir the Blood Violently, *Guajacum*, *Sassa Parilla*, *Leniscus*, *Raw Antimony*; for it is to be feared, that the Fever might very much increase, and some Vessel be broke in the Lungs; but such only, as are indued with Thin, and Penetrating Particles; which, tho' they attenuate the Blood, yet Stir it not much: such are your volatile Spirits and Salts; as Flower of *Benzoin*, *Sal. Armoniack*, *Tartar*, *Harts-horn*; the Spirits of *Urine*, *Blood*, *Soot*; the Salt of *Carduus Benedictus*, the Apple of *Quercetanus*, *Treacle-Water*; and many other things; whose Forms, and Doses you shall find in the Authors; which how Beneficial they are to *Pleuriticks*, may be gathered not only from the Doctrine of the Moderns; that prefer them to Cooling things; but also from the very Ancients, who prescribed those Remedies as Specifics in these Distempers: These *Sudorificks* may be exhibited every day, or every other day in Broths, *Juleps*, or *Emulsions*; so the Vessels be but emptied sufficiently: I add, that the Water, and Flowers of red *Poppies* are of very great vertue given in Broth. The other Remedies, which the Ancients prescribed; as Anoyntings of the Side, Cupping, *Fomentations*, *Cataplasms*, are mere

*Trifles,*

Trifles, and belong only to old Women and Quacks. I had forgot one thing, that is, that in the Beginning of the Distemper, to promote Spitting, and restrain the Cough, *Lobelia* of Juice of *Liquorish*, with *Sugar*, as also the same with Syrup of Red *Poppies*, may be prescrib'd; for they, as it is constant by Experience, promote the easy Spitting.

N O T E.

‘ If I should allow, that a *Pleurisy* and *Peripneumony* may  
 ‘ be cured without Bleeding, in the Low-Countries, Ger-  
 ‘ many and other Places, where they Bleed seldom in any  
 ‘ Distempers; yet thence it would not follow, that the  
 ‘ French, who are used to this Remedy, and have it, as it  
 ‘ were, by Inheritance could safely imitate the German Me-  
 ‘ thod: Several and different Paths may lead to the same  
 ‘ Place, and Health may be attain’d divers ways, yet I am for  
 ‘ that Method, which our Fore-Fathers have hitherto used  
 ‘ with success. As for Purging, if in any Distemper it  
 ‘ ought to be prescribed with caution, in this above all  
 ‘ it ought not to be made use of unadvisedly: Stir no  
 ‘ Juices, but such as are Digested (said the great Master  
 ‘ of Physick): it is not safe for a Surgeon to open unripe  
 ‘ Swellings.

‘ In the mean time precipitating *Alkalies*, and *Remedies*,  
 ‘ that promote Spitting, which are more proper in the  
 ‘ State and Declination, than the Beginning of the Distem-  
 ‘ per are not to be neglected: Opiates, moderately used,  
 ‘ are sometimes good in the Beginning, and the Increase;  
 ‘ but to be shun’d in the State of the Distemper, for fear  
 ‘ of retarding the Spitting: Red *Poppies* are of use through-  
 ‘ out the Distemper: The Specificks are red *Daisies*, *Car-*  
 ‘ *dus Benedictus*, *Wild Thistle*, *Sow-thistle*, *Scabious*, *Pim-*  
 ‘ *pernal*, *Mead-wort*, *Ground Ivy*, *Nettles*, the Root of *Great*  
 ‘ *Bur*, *Chervil*, the Flowers of *Acacia*, *Wild Orach*; as also  
 ‘ *Crabs-Eyes*, *Goats Blood*, *Pikes*, and *Wild-Boars Jaws*, *Coral*,  
 ‘ *Pearl*; the Dose of all which, is a Dram in the Waters  
 ‘ of the aforesaid Herbs: They recommend likewise shin-  
 ‘ ing Soot often wash’d in *Elder Water*, and Powder’d:  
 ‘ *Horse* and *Sheeps Dung* are not to be forgot in the be-  
 ‘ ginning, taken in some Red *Poppy Water*, or the Juice of  
 ‘ *Scabious*: the Apple of *Quercetanus* is also of use, which  
 ‘ is made by scooping out a fragrant Apple, that is not  
 ‘ sour,



‘Soure, and putting in a Dram of powdered *Frankincense*, then roasting it with some *Sugar Candy*; let them take a small draught of *Carduus Benedictus* Water after it: Others take of Flower of *Brimstone*, and *Frankincense*, each a Dram, then add the same quantity, or more of *Sperma Ceti*. and mix it with an Ounce, or two of *Linseed Oyl*, or Oyl of *Sweet Almonds*. *Sal prunel* is also proper, ten or fifteen Grains being added to the Juleps.

‘Concerning outward Applications, I wonder our Author should place them among the Remedies of Quacks and Old Women, when in this Case a Fomentation seemed so useful to *Hippocrates*, that *Anaxion* being taken with a *Pleurisy*, he applied a Fomentation to the affected Side for almost eight Days: Antiquity attributed so much to this Remedy, that Physicians of very great note, that hardly ever opened a Vein, or Purged, thought that the whole Cure of a *Pleurisy*, might be obsoled with Fomentations, Cataplasms, Embrocations, and the like Remedies. But I need say no more in so clear a Matter, that is every where so much confirm’d by Experience: I would give many Reasons of the Efficacy of these Remedies, was I not weary of this Argument.

## C H A P. XXIV.

### *Of a Syncope, Or Swooning.*

**A**MONG the principal Distempers of the Heart, the *Syncope* is reckon’d one: It is defin’d by the Authors to be a sudden Loss of all the *Strength*: To which I would add, proceeding from the Motion of the Heart being very much diminished, or taken away; For there is a sudden Loss of Strength in an *Apoplexy*, and yet not in a *Syncope*, it differs from a *Lipothymy* or *Fainting*, in the Degree; for that Distemper proceeds from a languid *Systole* of the Heart.

The nearest Cause of this Distemper is a Defect of the Spirits, or an Impotency, by reason of which the Heart cannot contract it self, to expel the Blood, that is contain-

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ed in its Cavities : Whence it is judged, that the *Syncope* is produced by the Relaxation, and not the Contraction of the Heart; that is, that it consists in the *Diastole* of the Heart, and not in its *Systole*, as some would have it; which is proved by the Causes that use to bring it, as excessive Evacuations, a very strong *Apoplexy*, Fasting, the Loss of Strength, and other things, that are apt to consume the Spirits, and hinder their Flux and Motion into the Heart; as also by the Remedies that are given in this Distemper, which are all Spirituous, and able to quicken the Spirits: add, that since the Heart and its Auricles are like the *Digastrick Muscle*, and those that are its Antagonists, and both Parts have moreover the same Nerves, derived from the same *Plexus*, and wash'd with the same Blood; it is impossible, that either of the Parts should suffer that, which is properly called a Convulsion, that is a lasting Contraction, but reciprocal Convulsive Motions must follow; as it often happens in several Fevers, and various Passions of the Mind, and causes a Palpitation of the Heart; when I call the Defect or Impotence of the Spirits the cause of the *Syncope*, I exclude not the *Elastick Copula* that is borrowed from the Blood, which in all Muscular Motion acts in consort with the Spirits; for if by some flat and perverse Disposition of the Blood the Heart is not supply'd with that, its Motion must be much diminish'd or abolish'd.

The *Syncope* is either *Idiopathick*, which proceeds from a Fault of the Heart it self; or *Sympathick*, which follows upon the Distempers of other Parts, as the upper Orifice of the Stomach, or the *Cerebellum*, because of the *Consensus* of those Parts, &c. It is also either *Essential*, when it begins of it self, without any other sensible Distemper, or *Symptomatick*, when it comes upon other Distempers; as *Malignant*, *Pestilens*, *Hellick*, *Fevers*, &c. This Defect, or Impotence of the Spirits to contract the Heart, proceeds from several Causes: such are all those things, that are able to consume, and dissipate the Spirits, or hinder their Flux and Motion; as immoderate Exercise and Labour, long and grievous Distempers, the abuse of Venery, excessive Evacuations, and Obstruction of the Nerves that serve the Heart, the immoderate Use of Narcoticks, Sorrows, an excessive Thickness, Dissolution, or Depauperation of the Blood; by reason of which, it either aggravates

vates the Ventricles too much, and oppresses the Force of the Spirits, or yields no *Elastick Matter*: Such are also an Inflammation, Ulcer, Polypus, and little Swellings of the Heart, large Tumours in its Ventricles, Corrupt Air, nasty Stinks, nay sometimes Sweet Odours, as may be seen in Women; Poysons, strong Medicines; likewise very sharp Pains in the Sensible parts, excessive Anger, and Joy, the Biting of Venemous Creatures, and the like.

The *Diagnosis* belonging to a *Syncope* has either regard to the Patient, more or less subject to this Distemper; the Distemper it self, or the Causes, that produce it: as for those that are much inclin'd to Swooning, they are People very weak by Nature, or much broken by a long Fit of Sicknes; Women more than Men; Virgins that have the *Green-sickness*, and a Suppression of the *Menstrua*: The Signs of the Distemper, when it is present, are as we have said in the Definition, a sudden Loss of Strength, no Pulse, or at least none much to be felt, pale Looks, Coldness of the Extremities, Cold Sweats; all which Signs are in a greater degree in a *Syncope*, and in a less in a *Lipothymy*.

The Signs of the Causes, if they are Procatartick, and external, as Poyson, or violent Medicines, a Pestilent Air, Anger, Joy, excessive Evacuation, nasty Stinks, Fasting, the Abuse of Venery, or Pain, will be manifest, and may be had from the Relation of the Patient, or those about him; if it proceeds from great Swellings, and *Polypi*, filling the whole Cavity of the Ventricles, it shall be known from Palpitations, Restlessness and frequent *Lipothymies* gone before; but if the *Syncope* be Symptomatick, and comes in a Malignant, or Pestilent *Fever*, the *Small-Pox*, &c. it has no other Cause, than that which produces the Distemper, and depraves the Blood and Spirits, viz. a Ferment, that flats, dissolves, or suddenly coagulates it: if the *Syncope* be *Cardiack*, and is caused by something, that is gnawing the upper Orifice of the Stomach, it will be manifest from the Pain perceived in that Part; as also by a Loathing and Vomiting gone before, and a Bitterness in the Mouth, with Thirst, that are present. But if it is neither caused by that Distemper, nor joyn'd to a strong Apoplexy; then it is a Sign, that the Fault lies Originally in the Heart, and is either an Inflammation, Ulcer, &c. A *Syncope* differs not from an *Apoplexy*, but only that

in the latter the Respiration is disordered, and difficult, and the Pulse Remains, and in the other, the Pulse is gone as to the Sense, but the Respiration Remains free, or at least not so much disturbed. But from a strong Apoplexy it differs in this, that in a *Syncope*, which comes alone by it self, the Respiration, and Motion of other parts is not taken away; but well in that, which is in the Hysterick Passion, and the Epilepsy by the Internal and External Convulsive Motions, which are not used to accompany the *Syncope*.

The Prognosis of the *Syncope* is to be made various, according as the Causes vary; for if these that are taken with it, come easily to themselves again, by sprinkling of cold Water in their Faces, and giving them Wine or Spirituous Liquors; if the Patient be not much Subject to it, if it proceeds from a slight Cause, I mean, a slight external one, it is not of such a bad Omen, and easily cured; but if it comes from a malignant, or Pestilent Distemper, Poyson, little or great Tumours in the Cavities of the Heart, an Ulcer, or some great external Causes; if the Patient be much Subject to it, if it lasts long; it's a *Syncope*, whatever may cause it, because the Paroxysm it self always proceeds from a defect, or impotence of the Spirits, and their Influx and motion being hindred, must be cured by those things that take away the Symptoms; as to lay the Patient backward, to throw cold Water in his Face, to make him Sneeze, to give him Wine and Spirituous Liquors; *Cinnamon*, *Imperial*, *Treacle*, or *Hungary-Water*, *Aqua vita*, to speak very loud to him, to pull his Hairs out, hard rubbing, to distort his Fingers, to give him volatile Salts in some liquid; *Venice Treacle*, or Confection of *Alkermes*. After the Paroxysm the Causes are to be consider'd, and as they vary, so the Cure is to be vary'd: If *Polypi*, Tumours, or a great Ulcer produce a *Syncope*, it is incurable: If Poyson, or the bite of a Venomous Animal bring this Distemper, prescribe Oyl, Milk, and Fat Broths, with other things related before; or let the part that is bit, be Scarified and Romented with *Aqua vita*, and *Venice Treacle*, giving the Patient some of the latter at the same time; Salt of *Vipers* and *Alexipharmacks*: If some other external Cause has produced a *Syncope*; As Joy, Anger, Sorrow, Fasting, nasty Stinks, &c. it is easily prevented, by only avoiding those



Causes: If the abuse of Venery, an excessive Evacuation of Blood, immoderate Labour, and other things, that consume the Strength and Spirits be the Cause, then make use of Restoratives, and Spirituous Remedies, as nourishing Vi-  
 Quals, Capons, Partridges, Jellies, Confections of Hyacinth and Alkermes, Spirits and volatile Salts, &c. but if it be Symptomack, and comes in *Apoplexies*, *Pestilent*, and *Malignant Fevers*, and other Distempers, then it must be cured by Remedies proper in those Diseases, which may be seen in their several Chapters: If a Cardialgy, and Vellication of the upper Orifice of the Stomach causes it, make use of Vomits.

## C H A P. XXV.

### *Of the Imbecillity of the Strength.*

**T**H<sup>O</sup> the Imbecillity of the Strength cannot properly be call'd a Distemper, since it is only a Symptom attending all, especially grievous Distempers; yet I have a mind to treat of it here, because it is often so urgent, that it requires Remedies, and to be taken care off even to the neglect of the Distemper it self, and its Causes: And tho' moreover it seems to belong to the whole Body, because all the Functions are weakned by it, nevertheless it belongs peculiarly to the Heart, for as much as all the Functions depend upon the same radically: Wherefore treating of the Distempers of the Heart, it cannot be amiss to say something of this Imbecillity of the Strength. This Symptom consists, as may be gathered from what has been said, in a *Disorder*, and notable diminution of all, especially the Vital and Animal Functions of the Body: For the Pulse is little and low, yet to be felt; in which it differs from a *Syncope*: There is also an Impotency of Motion and Sense; so that the Members, and Parts cannot be expeditiously moved, and the Senses are not quick.

This Symptom has no other Causes, than those, which are able to produce a *Syncope*, viz. a Defect, and Languor of the *Animal* Spirits; for the Strength depends only upon the due Quantity and Motion of the *Animal* Spirits, with which also, as we said in the *Syncope*, acts in

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confort the due Constitution of the Blood ; which is such a Disposition of the Mass, where the active, Principles, the Spirit and *Salt* are in a due Quantity, Proportion, and Mixture predominant over the Passive ; for if the Passive prevail above the active Principles it Causes such a disorder, that the Blood can not yeild that due, and pure Matter, which is required for the Generation of the Spirits in the Brain ; because the same Blood assists the Spirits in the Motion of the Heart, and other parts, and their Nutrition ; wherefore, if it be Vitiated in its Mixture, it cannot perform its Duty ; neither Nourish the Parts, nor perform its Fermentative and circular Motion, in which the Natural Heat, and the welfare of the strength consist. And therefore it is no wonder, if there be an Imbecillity of the Strength in Acute, Grievous, Malignant, Pestilent, nay also *Chronick* Distempers, and in all other cases, where the Spirits are not generated, dissipated, or not dispensed ; as in sleepy Distempers, Watchings, immoderate Exercise, copious Evacuations, Excessive Venery ; which when they work by slow degrees insensibly, produce an Imbecillity of the Strength ; but when they Act suddenly, that is exhaust the Spirits presently, then they cause a *Syncope*.

The Imbecillity of the Strength is so manifest of it self, that it requires no Diagnostick Signs, and those of the Causes are the same which we named in the *Syncope* ; for the Imbecillity of the Strength is owing to the same Causes, not Operating suddenly, as I have said already, but insensibly and by degrees.

The Prognosis of the Imbecillity of the Strength must, absolutely speaking, always be Bad ; because from the Strength it is that Health and Recovery are always expected ; and, unless that be intire, we can make no use of the best Remedies ; as Bleeding and Purging : Wherefore in all Distempers the Imbecillity of the Strength is of a very bad Omen : But where it proceeds from slight External Causes ; as Labour, Watching, &c. it is not so Dangerous.

The Indication of the Cure of the Imbecillity of the Strength is the same with that, which in Distempers is called the Conservatory and Vital indication ; it is fulfill'd without regard of the Distemper, or its Cause ; for

if you consider the Distempers, on which it depends, you must fetch the Cure from the proper Chapters of those Distempers. The Remedies that particularly Cure the Imbecillity of the Strength are all Analeptick, and Spirituous Remedies; yet with this precaution, that they may not Augment the Distemper, or the Morbifick Cause; so that they are to be prescribed in a lesser Dose, and more temper'd.

These Remedies then differ not from those, which we have prescribed in the *Syncope*; as Rich Broths of Capons, Partridges, Jelly of Hearts-borne, Confection of Alkermes, Wine, Cinamon Water, Volatile Salts, Distill'd Waters, the Restorative prescribed by *Riverius*, Yolks of Eggs, Cordial Juleps, and the Water of *Cardus Benedictus*, Scabious, Naptba, the Imperial Water, the Confection of Hyacinth, or a Restorative Opiat of Conserve of Bugloss, Cloves, and preserved Nutmegs, the Essence of Anniseeds, and Cloves; as also young Pidgeons or Puppies cut asunder and applyed to the Region of the Heart, with more other things obvious in the Author.

## N O T E.

' To the Chapters of the *Syncope* and Imbecillity of the  
' Strength there is little to be added: Of the first I shall  
' only Note, that our Author, who is always us'd to re-  
' ject outward Applications, says nothing of Fomentations  
' to be applyed to the Region of the Heart, or the Pit  
' of the Stomach: Yet it is manifest from Experience, that  
' they in this case are applyed with success to those Parts,  
' as also to the Wrists: whether the *Effluvia*, or flying A-  
' toms of the Spices and Spirituous matters, of which those  
' *Epithema's* are made, get in to the end of the Vessels,  
' or penetrate and Stir the little Fibres of the Nerves of  
' the Skin: Or whether the greatest part of the *Atoms* of  
' the said Spices received in the Nostrils have this Ef-  
' fect immediatly upon the Nerves, as well as the Spirits;  
' what ever it be, it is very proper to apply outward-  
' ly, or smell to, little bags, fill'd with Balm, Lemon-peel,  
' red Roses, Clove-gilly Flowers, Mint, Sanders, Aromatick  
' powders, &c. and sprinkled with the Spirit of Wine,  
' simple, or Treacle Vinegar, Rose-water, &c. the true Bal-

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‘*ſam*, and other Artificial *Balsams*, and *Oyls* do great good  
 ‘ by their Fragrancy ; new Bread often ſmell’d to is like-  
 ‘ wiſe much praiſed : If more potent Remedies are re-  
 ‘ quired, fly to the Volatile ſalt or Spirit of *Sal Armoniack*,  
 ‘ whoſe ſmell, by ſtriking the Noſtrils very powerſul-  
 ‘ ly raiſes People even from *Apoplexies* ; the ſame ſpirit  
 ‘ Imbued with the *Oyl* of Spices, and joyn’d with Spirit  
 ‘ of *Wine*, is an excellent Remedy to be taken in Wine,  
 ‘ or ſome other proper Liquor : The ſame may be ſaid  
 ‘ of the camphorated Spirit of *Treacle*, the ſuccinated Li-  
 ‘ quor of *Harts-horn*, and the like.

## C H A P. XXVI.

### *Of the Palpitation of the Heart.*

**T**H<sup>O</sup>’ there are no Phyſicians of great note wanting in  
 our Age, that either blinded with prejudices, or Obſti-  
 natley ſticking to the party of the Ancients quite rejeſt the  
 ſo well Eſtabliſhed, and every way invincible Opinion of  
*Lower* about the Motion of the Heart ; yet if we ex-  
 amine the thing more ſeriouſly, and attentively conſider  
 the Parts and Fabrick of the Heart ; it is not to be denied,  
 but that it is a Muſcle, and that it a nd is relaxed, and  
 contracted, in the ſame manner, as other Muſcles are ;  
 for if it be a received Opinion, that all the Parts of  
 the Body, that are capable of Contraction are by means of  
 the *Animal* Spirits, aſſiſted by the Blood, contracted ;  
 (not excluding even the Membranous and Cartilagineous  
 Parts ; as the Stomach, the Guts, the Bladder, the  
 Bronchia of the Lungs, and their little Bladders, &c.)  
 how much more, ought not the Syſtole of the Heart, or  
 that ſtrong Motion which ſqueezes the Blood out  
 of its Cavities, to be aſcribed to the ſame Spirits, yet  
 aſſiſted by the Elatiſtick *Copula* of the Blood ; for beſides  
 the innumerable fleſhy Fibers (which commonly are cal-  
 led the Inſtruments of Muſcular motion) diſpoſed in the  
 manner of a Vice, and deſcending at the Side and Ob-  
 liquely from one part of the Baſis to the Cone, as they  
 aſcend again to the other Part from the Cone ; or at  
 leaſt bent Back from the *Septum Tranſverſum*, or thoſe



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*Eminencies* that are called the Pillars of the Heart, besides, I say, all this show of Muscular Structure, it has also if you'll believe Anatomy, from the *Par oſtæum Intercostale* and the *Plexus cardiaci*, which are as it were the *Store-house* of the Spirits, abundance more Nerves, than other tho' larger Muscles; whence the Heart is supplied with a Provision of Spirits by the intricate Contortion of the Fibres not easily dissipated; in so much, that after it is torn from the Body, or his Nerves are cut off, it has yet Spirits enough Left, to continue the reciprocal Contraction for some time, which is not in other Muscles, that are destitute of this *Mechanick* Structure. Since then, for the Reasons already given, and many more which I shall not set down here, not to increase the work to a vast bulk, the Heart is to be Ranked in the class of Muscles; it can not be disown'd but that it is subject to several troubles, and Diseases; that commonly infest those Parts, and especially to *Convulsive* Motions; a strange and peculiar kind of which is the *Palpitation* of which we now Treat. To distinguish it from the Febrile Motions of the Heart, which are also really Convulsive, it may be defin'd to be, A very Violent Concussion of the Heart, or a mighty *Systole* in which the Cavities being of all Sides contracted very hard by the Muscular fibres, one, which is the moveable part of this Muscle, is pulled back so Violently toward the Basis, which is the immoveable Part, and lie more backward, that, Jumping forward again with force, it strongly strikes the Breast; and partly because the thickness of the Fibres is preternaturally Augmented, partly, because the Blood, to be thrust out of the Ventricles, is by some Stop, if there be any, or the Narrowness of the Passage beaten back against the Walls that environ the Heart) the Ribs are, as *Fernelius* tells us, sometimes parted, and moved from their places; and, as *Foreſtus* observes, the Sound of it is heard some paces off, nay without the Patient's Chamber.

This Distemper, besides the common Causes, that are apt to produce Convulsive Motions in other Muscles; as among the occasional ones, an Irritation made by Worms, the Acrimony of the Blood, or Water contained in the *Pericardium*, &c. which giving Pain; and disorderly

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derly moving the Spirits, that lodge there, sets the Convulsive matter, if it Skulks in the Blood, to work ; and by making a more intimate Mixture of that, with the Spirits agitated already, produces a very great Expansion of them in the Muscular Fibres ; among the efficient Causes is this same Convulsive Matter, or the particles of the Blood, more than usually *Elastick*, and *Hererogeneous* to the Spirits, gathered in the Heart by its peculiar Disposition ; which, because of the Violent Fermentation they make with the Spirits, most commonly peccant also their way, make its Fibres much thicker ; whence a very strong Contraction, and shortning of the Heart must follow : besides these Causes, I say, which are able to raise Convulsive Motions in other Muscles of the Body and affect sometimes one sometimes more, according as the Distemper is Universal, or Singular ; there are several others peculiar to the Heart only ; which yet are not to be excluded for the greatest part from the number of the occasional Causes : Such are all things, that are able to retard the Blood in the Caverns of the Heart ; and by what means soever hindering its Egress from them to make an impetuous *Reflexion* against the sides of the Ventricles.

Thus it is observed by daily Practice, that those, that have thick, Viscous, or clodded Blood, are often troubled with a *Palpitation* of the Heart : The reason of which is ; that the Blood staying in the Heart and loading it, either stops its going out by its own Thickness, and Viscidity ; and so not being able to go out intire by the *Systole* of the Heart, jumps violently back against its sides ; or that being Acid if it has got such a Disposition by staying there, it yields a *copula* more *Elastick* than the Spirits, that are *Salino-volatile*, or yields too much of it ; which afterwards, joyn'd with them, raises a Violent endeavour in the Heart, of expelling the Blood out of its Cavities : Flethy also, and bony Excrescencies, Stones, *Polypi*, little Swellings bred, either in the Ventricles of the Heart, or the Arteries about it, and Pulmonick Vessels, are often the Causes of a *Palpitation* ; for as much as they stay the Blood in its Cavities, which by the *Systole* was to be thrust out ; whence stoppt in its Passage is must of necessity with great force fly back

against the sides of the Heart, and by lifting them up extraordinarily, strongly strike the Breast; hence we may gather, which way immoderate Exercise, Anger, Drunkenness, very hot Bagnio's, and Poyson, which are the External and Procatartick Causes of this Distemper, can occasion a *Palpitation* of the Heart; as also how thick, gross, and Viscous Food, a foggy Air, an Idle, and sedentary Life, the Excessive use of Acids, Tartarous Wine, Sorrow, &c. use to dispose the Body before hand to this Distemper; for they all glut the Heart with Blood, Augment its *Elastick Copula*, or thicken and coagulate the Blood it self; which afterwards is not easily thrust out of the Ventricles of the Heart, and is apt in them or the annex'd Vessels to produce little Stones, and swelling *Polypi*, &c.

Since the *Palpitation* is to be felt, seen, and sometimes heard, we need no Diagnosticks to discover this Distemper; but its Causes being more abstruse, and hidden must be distinguish'd by peculiar Signs. If *Polypi*, fleshy Excrecencies, Stones, Swellings have Caused this Distemper, the Heart shall suffer a continual *Palpitation*, by reason of the continual presence of the cause, the Pulse also shall be less; because the Blood, by the obstacle, that hinders it, is not so easily push'd in to the Arteries; but if the Distemper proceeds from Thick, and Viscous Blood, or a Convulsive Matter, it may be known by the absence of the aforesaid Signs; as likewise by several other Symptoms, that use to attend the Thickness, and Viscidity of the Blood, and the copiousness of the *Elastick Copula*; lastly Worms, or an Ulcer bred in the Heart, or the Water contain'd in the Pericardium, &c. bring the *Palpitation*; the Cause cannot be discovered, before the Heart is open'd.

The *Palpitation* of the Heart, proceeding from a *Polypus*, a Swelling, a little Stone, a bony, or fleshy Excrecency, bred either in the Heart, or the Vessels about it, is commonly of a bad Omen, and terminates for the greatest part in a mortal *Syncope*: That also, which has its Original from a little Ball of Worms, or an Ulcer of the Heart is to be counted very Dangerous; but that which owes its Birth to the other recited Causes, tho' it seems by Reason of the Nobility of the Part affected to portend

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portend some Danger, yields yet easier to Remedies and has not always, like the other, a fatal End.

The Remedies, that are to be prescribed in the Cure of a *Palpitation* of the Heart, are besides the *Universalia*, such as attenuate, dissolve, and open; for whether any *Excreescency*, or clodded Blood that posses'd the Ventricles of the Heart, or the Blood more fill'd, than it should be, with Convulsive Matter (which we suspected above to be Acid Particles) has caused this Distemper; these, which are the most frequent Causes, (for an Ulcer, and Worms are seldom accused) seem to require nothing, but Medicines of refin'd Parts, that may correct, and make fluid the Viscous, and terestrial Blood, that is over-charged with Acid Particles, and able to produce Stones, Swellings, *Poylpi*, &c. This is done by opening Roots, *Aromatick* Plants, Diaphoreticks, Chalybeats, all Volatile Spirits, and Lixivious Salts; in a word all, what is commonly used in a Thick, and Viscous Disposition of the Blood; yet the Remedy, that Surpasses all the rest, is Volatile Salts; which, because, they are indu'd with very subtle Particles, flying upon the least Heat to the top of the *Alembick*, are able potently and expeditiously to correct the Antecedent, us well as Joyn'd Causes, and to procure the Fluidity of the Blood; by which it loads the Ventricles of the Heart less, and is more easily thrust out of 'em by the *Systole*.

N O T E.

With the *Palpitation* of the Heart they commonly con-  
found a Distemper, that is a kin to it, an Intermision of  
the Pulse, which is a Symptom of a fault in the Action  
of the Heart, and Arteries. This sometimes is not Dan-  
gerous, especially to Ancient people to whom even in a  
full state of Health this Intermision is very Familiar with-  
out any prejudice: The same happens often to Learned  
men, Monks, and others, that are very intent on Study,  
and Meditation, melancholy People, and such as have  
some great concern upon their Spirits.



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• So *Argenterius* a Physician of great Note relates of himself, that sometimes he has had this intermission of the Pulse without any remarkable prejudice to his Health: He thought, that too much Study, with which he had tired the Vital faculty of the Heart, was the cause of his Distemper, which being restored by an Intermission of his hard Studies, and a proper Diet, he came to his former Health. I know another, who is likewise a Physician, that has had this Intermission of the Pulse: This was attack'd with it when he was about 35, and being frightned by the Symptom, the more because he felt a sense of Heaviness, and as it were a drawing together in the Heart at the same time of this Intermission, used abundance of Remedies among which the vulgar Cordials, *Balm*, *Citrons*, Confection of *Alkermes*, which first he made use of, had little effect; the volatile Salts, Wine and all spirituous Remedies, which he took to Precipitate the Acid, and promote the Circulation, by agitating the Spirits, made him rather worse: Tea and Coffee were no less offensive; nay the Patient thought, and perhaps with good reason, that they had been the first Cause of his Distemper: Purgatives and even Glysters disturbed him very much, neither did he find any benefit by Bleeding, which, tho' very sparingly performed, manifestly took away his strength: But cooling Remedies, at last, and fix'd *Alkalis* were very Beneficial to him, especially the cold *nitrous mineral Waters* did him great good, tho' they were Purg- ing: But above all the rest the wonderful *Alkali*, which ought not to be pass'd over in silence of common Spring, or Well water did alone more good in this case than all the other Remedies; for he abstained for two Months in the Winter from Wine, and drank nothing, but very Cold water, and still Mixing it with his Wine he keeps God be Prais'd very well.

• This will not seem strange to any that has read, what the Learned *Dr. Torzi* Physician to the *Pope* relates of some, that by great Drinking of strong, and unmix'd Wines, as also by Anger and Fear, had got this Intermission of the Pulse: For this Spasmodick Symptom proceeds from Causes, that irritate the Spirits, and pro-

‘ provoke them to extraordinary Motions, especially in  
 ‘ them that are Predisposed, and Subject to the Hypochon-  
 ‘ driack,

‘ That the Stomach may contribute to this is manifest  
 ‘ from what the same Author adds, *viz.* that some have been  
 ‘ afflicted with an Intermision of the Pulse by Eating of  
 ‘ Chesnuts and Herbs.

‘ I have found likewise the said Intermision in Chil-  
 ‘ dren, that nevertheless were in perfect Health; whence  
 ‘ we may conclude, that an intermittent Pulse by it self,  
 ‘ if it be not attended with other Symptoms, is not so  
 ‘ Ominous; especially if it continues not.

‘ But if such a Pulse follows, or accompanies other  
 ‘ Distempers, then it is full of Danger: So, when it is  
 ‘ the off-spring of a *Polypus* of the Heart, it portends  
 ‘ certain Death. I have also observed sometimes, that  
 ‘ this Intermision has accompani’d grievous Head-akes,  
 ‘ especially in young Girls, that afterwards died of Con-  
 ‘ vulsive Motions and Sleepy Distempers,

## C H A P. XXVII.

### *Of the H I C K U P.*

**T**H O’ the *Hickup* belongs not to the Stomach; as  
 the seat of this Distemper, as we shall Demonstrate  
 Lower; yet I would place it among the Diseases of the  
 Breast, and Stomach, not only because *Riverius*  
 treats the *Hickup* as a Symptom of the Stomach; but  
 because this Distemper, tho’ it resides not in the Stomach,  
 yet commonly has its principal rise from it; for when  
 the upper Orifice of the Stomach is affected, the *Hickup*  
 commonly follows. I shall not consider here that *Hickup*,  
 which does no harm, and is often observed after the  
 Swallowing of dry Food, without any Prejudice to  
 Health,

Health, tho' then it is performed in the same manner as when it is hurtfull; for that requires no Remedies, and commonly ceases of it self; but only that, which is prejudicial, and depends upon some sensible or insensible Distemper; for then, as being for the greatest part Pressing, it demands a peculiar Cure for it self. The *Hickup*, then taken in this Sense, we shall define to be not a Convulsion, but a Convulsive Motion, not as the Ancients thought of the Stomach, but of the Midriff or *Septum Transversum*, returning after small Intervals of time, joyn'd with a Swooning and sudden Inspiration. That this Symptom proceeds from the Midriff, and not from the Stomach immediately, may be proved by more than one Reason: for besides that we can imitate the *Hickup*, when we please; which argues that it is rather a Fault of the Midriff, whose Motion is voluntary, at least whilst we are awake, than of the Stomach, whose Motion is not Subject to our Will: the Motion of the Stomach moreover, whatever it be, can only contract, and straiten the Stomach, as we shew'd in the Chapter of Vomiting; from whence what appears in the *Hickup* cannot be deduced; for in a contractive Motion of the Stomach we are so far from drawing our Breath inward, as nobody dares deny, but we do in the Action of the *Hickup*; that because of the great Contraction of the *Epigastrick* Muscles squeezing the abdomen inwards, and consequently thrusting the *Viscera* toward the Midriff, the same is forced to ascend, and make us Breath outward, which can never happen in the *Hickup*; as is plain by Experience. From hence we may infer the Difference between Vomiting and the *Hickup*, for that which *Riverius* alledges, is a mere Dream, as you may see where we treated of Vomiting.

The *Hickup* is either *Idiopathick*, proceeding from its own Fault, or the Midriff it self, tho' that happens seldom; or Sympathick, and takes its Birth from a Fault of the Upper Orifice of the Stomach, communicated to the Nervous Center of the Midriff: In the first Species some Convulsive Matter is gather'd in the Muscular Substance of the Midriff, which produces the Convulsive Motions there, as it does in other Muscles: In the Second Species some Humour, or Body that irritates, and pulls

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the Nervous Upper Orifice of the Stomach, by a Consensus affects also the Midriff, with which it has a Communication, by Membranes and Nervous Fibres, but the Midriff being stronger, prevails above the Action of the Stomach, and by pressing downward shakes of the Matter that troubled it.

The Cause of the *Idiopathick Hickup* is, as I have said, a Convulsive Matter; or to speak plainer, Particles that are *Heterogeneous* to the Spirits, by vitiated Blood, deposited in the Midriff, because of its peculiar Disposition, as commonly it happens in other Particular Convulsions; which Matter when it meets with the Spirits, brought in to this Muscle; because of its *Heterogeneity* Ferments, with the same in the Muscular Substance of the Midriff, and by blowing up its fleshy Fibres, promotes its Contraction. But if the *Hickup* be Sympathick, we must not fly to any other Causes, than those that are able, by pulling and provoking the Upper Orifice of the Stomach, which is annex'd to the Midriff, disorderly to move and agitate the Spirits, that lodge in that Muscle, or to make a very intimate mixture of the *Elastick* Matter, which is always in the Blood, with the Spirits in the Midriff, from whence Convulsive Motions must necessarily follow.

This may be done by Humours that are indued with an Acrimony, that are Bilious, Salt, &c. especially if they be Viscous, and stick to the upper Orifice of the Stomach; likewise by sharp and biting Vapours, exhaled from corrupt Humours or Food, or the acid pancreatic Juice; these Humours either come from a vitiated Mass of Blood, or are derived from Food that creates bad Humours, and ferments disorderly: The reason why in this case no Vomiting is raised is, that these Humours are not volatile enough, as *Sylvius* observes, and perhaps not copious enough to pull the whole Cavity of the Stomach; a Pain of the Stomach is commonly attended, with an Inclination to Vomit, and the *Hickup*.

The external Causes are all things that can make the Humours sharp, this Distemper wants no *Diagnosis* being so obvious to the Senses.



As to the *Prognosis*; a *Hickup* proceeding from a *Procatartick* Cause, *Victuals*, *Drink*, &c. is not dangerous; nor that, which either goes before, or follows *Critical Vomiting*: When it comes in an *Inflammation* of the *Liver*, it is bad; for it is a sign the *Distemper* spreads: In a *Labourious Fever* the *Hickup* is bad, (says *Hippocrates*) which is to be understood of *Patients* worn out by a *Malignant*, *Arduent*, *Hectick*, or other *Fever*; for then the *Humours* are grown very sharp and vitiated, inasmuch that they cannot be brought back again to their natural State, and in that Sense, (says *Willis*) that he never saw one cured: the *Hickup* coming in the *Bloody-Flux* is bad also; for it shews, that the peccant *Humours* reach as far as the *Stomach*, and *Midriff*.

*Vomiting*, the *Hickup* and *Redness* of the *Eyes*, are bad, (says *Hippocrates*) which understand in *Distempers*; not because it is a *Sign* of an *Inflammation* of the *Stomach* or the *Brain*, but rather because it shews, that all what should be thrown out by *Vomiting*, is not come up yet, but stays in the *Stomach*, and promotes more *Vomiting*; for if the *Redness* of the *Eyes* is not a *Sign* of an *Inflammation* of the *Brain*, but of the violent *Straining* in the *Vomiting*, which impairs the *Strength*.

The *Method of Cure*, directed to the *Hickup*, is *Plebotomy*; which is to be repeated several times: If there be a *Fever*, and the *Strength* allows it; *Platerus* recommends *Vomits*; *Laudanum* and *Narcoticks* are not to be last Named; *Purges*, *Elixir Proprietatis*, the *Cold-Bath*, *Emulsions*, *Cooling Juleps*, *Salt of Worm-wood* are proper, as also sharp *Glysters*, injected now and then, and *Snuffs*; *Pills* do Wonders in this *Distemper*, especially those which *Riverius* recommends of *Aloe*, *Diagridium* and *Opium*, *Hot* and *Cold Mineral Waters*, large draughts of *Water*, because it dilutes the *Salts*, especially if *Worm-wood*, *Coriander*, *Dill* or *Anniseeds* have been *Boyl'd* in it: If the Cause be an acid, the *Abdomen* may also be fomented with *Oxicate*; if it proceeds from the *Stomach* give corroborative *Opiats*.

If some *Distemper* brings this *Symptom*, that must be taken care off by its proper *Remedies*; for the Cause being taken away, the *Effect* ceases: *Riverius* in his *Observations* recommends the *Remedy* call'd *Calomelanos*, and gives

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gives xvi. Grains of it; which is very good in Children.

N O T E.

‘ In the *Hickup* they recommend *Opium* with *Castor*, and  
‘ *Anniseed*, or *Dill-seed*, *Ginger* preserv’d in the *Indies*, burnt  
‘ *Harts-Horn*, a Dram for a Dose; and other Absorbent  
‘ Powders: Outwardly it is proper to Anoynt the Navel  
‘ with Oyl of *Anniseed*, or to apply a Spunge with very  
‘ strong *Vinegar*, *Castor*, *Pepper* and *Muflard*, to the  
‘ Stomach.

‘ The different Causes of the *Hickup* ought to be well  
‘ minded, for according as they vary, it is sometimes ne-  
‘ cessary to Evacuate, especially by Vomiting, and some  
‘ times you must forbear all Evacuations.

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O F T H E  
Practice of P H Y S I C K.

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B O O K III.  
Of the Distempers of W O M E N.

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C H A P. I.

Of the Suppression of the Menstrua and Green-  
Sickness.

I T is not without Reason, that we treat of the *Green-sickness*, and the Suppression of the *Menstrua* in the same Chapter, since it happens very often in Practice, that both these Distempers are to be Cured at the same time, and the *Green-sickness* is commonly attend-  
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ed by a Suppression of the *Menstrua*, as its ordinary Symptom; and the Suppression of the *Menstrua*, from what cause soever it may proceed, most commonly draws in the *Green-sickness* for its Companion. Yet these Distempers, tho' they are very often found joyned together, may be produced and subsist apart, and both also sometimes without any Fault of the Womb; as shall appear by the Causes to be ascribed to them.

As to the *Green-sickness* then, or the Pale Colour of *Virgins*, or the Pale and *Lover's Fever*; It is a Distemper not so confined to *Virgins*, but that it sometimes invades Married Women also, nay Boys and Men, tho' that happens rarely; because it proceeds not so much from the Womb, as from the thickens and Spiritlessness of the Blood, and a *Cachexy*, whose Species it is, it consists in a Whitish and Vitious Habit of all the Body, inclining to a *Cachexy*; to which several other Symptoms are joyn'd to be lower enumerated and explain'd.

The Cause of this bad Colour and Habit, and all the Symptoms whatever, that are found in the *Green-sickness*, is nothing else but a bad, Languid, and thick Constitution of the Mass of Blood, which Cause, from the same so vitiated Blood, is able to produce Obstructions, and chiefly in the Vessels of the *Abdomen*, and the *Viscera* contained in it: which tho' it gives not the first rise to this Distemper; for the Blood must be first depraved, and grow thick, before it produces Obstructions, yet to nourish it and make it shoot its Roots deeper it concurs not a little; for it is the Fault of Obstructions, that the Circulation of the Blood grows Dayly more Difficult; hence proceed Heaviness, and often Swellings of the Members, and the usual Separations are not made: Whence the Constitution of the Blood also grows worse; besides those Excrementitious Particles, that Circulate within it, and use to be separated from it. But the Cause of this bad, and thick Constitution of the Blood is the bad and imperfect Chyle, that is sent to the Blood; for from the same is likewise made Blood that is impure, and not Elaborated; for in this case the Chyle cannot be separated, attenuated, and made volatile by a due quantity of Particles of the Blood; that have naturally fermented; which is required to make perfect Blood of it; for it is  
necessary

necessary, that by the Ferment in the Stomach, as also the *Succus Pancreaticus*, and Gall in the Guts, it arrives to a degree of Perfection, and Tenuity; otherwise whatever the fault is of this first Concoction, it must be follow'd by another in the Sanguification: So if the Chyle be thick and raw, its Particles and Principles can never be so attenuated and disintangled, but the Blood that comes from it, will be likewise thick and raw, destitute of active Principles, Spirits and Volatility. What has been said of the Fault of the Concoction must be understood likewise of the many sorts of bad Food, from which it is difficult, or impossible, that Chyle should be made, but what is apt to make bad and crude Blood. It is manifest then, that the abuse of the six unnatural things, and the various Errours of Diet, which Girls, that are grown up, use to commit above others, produce this bad disposition of the Blood; in which the same is found to consist of very gross Particles, and to be destitute of its finest and most active Principles; wherefore it is fit to cause the *Green-sickness*: For as the Colour of the Face, and the whole Body, in every one is used to declare the Nature of the Blood; and as from the same Blood well constituted of a Purple lively red Colour, which it has from the congruous, and intimate mixture of its Sulphur, and volatile Salt, their frequent Fermentations and Separation of the Dross; likewise a fresh and laudable Colour and Habit of Body are produced; so if in the same Blood the said Particles are Fewer, or too much intangled with the other, could not attain to that degree of mixture and exaltation, the Colour shall be consequently less lively, and more different from the Natural; and commonly Pale, sometimes of a Lead-Colour, or greenish, according to the various Mixture of the Principles of the Blood.

The other Symptoms of this Distemper, are first, Heaviness and Slowness of all the Body, Swelling of the Parts, and spontaneous Weariness; for the Blood Circulates slowly in all the Parts, and being thick besides, causes the Heaviness, Inflations and Slowness; but the spontaneous Weariness, and the little aptitude to Motion, proceed not only from the said slow Motion of the Blood, but likewise from the defect of the Animal Spirits, of which such Blood furnishes the Brain a less Quantity than is required; besides that, they are not active and volatile enough, and consequently



quently unfit to perform the usual Motions of the Parts: neither is such Blood capable of yielding that *Elastick Copula* to the Spirits, which is so necessary to the performance of the Motions of the Muscular Parts. Secondly, a difficulty of Breathing, and Beating of the Heart upon the least Exercise; because, as from every Motion of the Body, the Motion and Fermentation of the Blood are increased, so the same rushes in greater quantity into the Vessels of the Lungs, with which, whilst they, and the Cavity of the Heart are stuff'd, the difficulty of Breathing, and Palpitation must follow upon any tho' never so slight an Occasion; because of the above-said Stoppage of the Cavities of the Heart, and the Sense of Heaviness that is brought upon it; whence it comes, that the Blood being thick besides, and coming in a great Quantity, cannot all be thrust into the Arteries by one *Systole*, tho' it be push'd with force; and must consequently jump back against the sides of the Heart, and cause the Motion of Palpitation. Thirdly, a loathing of Viſuals, by reason of the debility of the Ferment of the Stomach, or bad Humours, made from bad Concoctions in the first Passages, in which the Ferment of the Stomach is so intangled, that it cannot make the usual provocations in the Membranes of the Stomach, that are requisite to create an Appetite to Viſuals. Fourthly, a great Inclination to Sleep, which also is sounder than ordinary; because of the defect of the Spirits and their Mobility; and because the Blood about the Brain, and other Parts, circulating slower, burdens it; which being, as we said, but ill furnished with Spirits, falls very easily together. Fifthly, a quick and frequent Pulse; because as the Blood is thick, so the Spirits are few, and of little force, and the *Systole* of the Heart cannot be slowly performed; whence the Pulse is very often quick and frequent. Lastly, With this Distemper, as I said before, a Suppression of the *Menstrua* is coupled; which sometimes is joyned by various Obstructions of the Parts of the Abdomen, and likewise of the Vessels of the *Uterus*, proceeding from the Thickness and Crudity of the Blood; whence the Flux of the Menstrual Blood is stopt: But since we are to treat here of the Suppression of the *Menstrua*, not only, as it is a Symptom of this Distemper, but as it can, and is used to come without it in Girls, and those of riper Ages, or Women that by the Law of Natural Oeconomy should every

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every Month by this Flux of Blood be cleansed; we must alledge all the Causes, that are able to Suppress it in any Virgin, or Woman not with Child.

All these Causes have a Relation to the *Uterus*, and its Vessels or to the Blood; Concerning the first there is, as we have said, the Obstruction of its Vessels, either in the Green-sickness, or without it. Besides, Tumours, Inflammations, and all sorts of *Schirri* of the *Uterus* are able to stop this flux; and likewise the said Ailments of the parts near the *Uterus*, by squeezing and straitning its Vessels may do the same; if the Orifice of the *Uterus* be stoppt, it also causes the Suppression of this Flux; tho' in the mean time the Blood be gathered, as it is observed sometimes, in the Cavities of the *Uterus*, for want of a Passage, through which it might be voided. The faults that in relation of the Blood suppress the Menstrual Flux; are first, when it is very defective in the Body, by reason of Evacuations gone before; as it happens in those that are lately recover'd from Illness and others: Secondly, when it seeks other Passages, as the Nostriils, the Hemorrhoids, and when by other Sensible Means its constant and regular voiding serves instead of the Menstrual Flux. Thirdly, if the usual Fermentation in the Blood, by virtue of which the Menstrual Flux is promoted, be not in due manner perform'd; which happens in those Distempers, in which the more Active and Elastick Particles in the Mass of Blood, are very much wanting, and its Particles ferment but slowly; and for this reason the Suppression of the *Menses* may happen to come in the *Green-sickness*; especially if it be inveterate, without the help of Obstructions. Lastly, the Courses may be stoppt, because of a *Pletora*, or Superfluity of the Blood throughout the Body; because, the Vessels being in this Case too much swell'd and distended, in the Vessels of the *Uterus* is not room enough for the Agitation of the Particles of the Blood, nor for their going out of them through the Orifices.

The Diagnosis, because you are acquainted with the Distemper from the Patient, consists only in distinguishing it from a natural Cause, viz. the Patient's being with Child. Therefore, here you must examine the Signs of being with Child, assign'd by *Riverius* which is not necessary, if the Distemper happens to be in an honest Single Person, and of whom no such Suspicion can be had, if there be any such.

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The Signs of the Preternatural Causes are easie enough: the *Green-sickness*, and Suppression of the *Menstrua*, tho' Chronick Distempers, are yet of dangerous Consequence and especially the Obstruction of the *Menstrua*; because of the grievous Distempers it threatens; for hence arise *Fevers*, *Dropsies*, *Cachexies*.

The Cure of the *Green-sickness* must always be the same; or at least differ very little; but in the Suppression of the *Menstrua*, it must variously be managed, according to the variety of the Causes. To cure the *Green-sickness* then, attenuating, aperient, and Evacuating Remedies are chiefly used. Let Emollient and Laxative Glysters be administered presently, and after that Order, Bleeding in the Arm, which must be repeated, but yet as the Patient is full of Blood or not; for it is not proper to repeat it very often; in the mean time order Juleps and Apozems, made of attenuating Simples, and Aperient Roots; adding fix'd and Volatile Salts, Spirituous Liquors, Heating Confections, Worm-wood Wine, and let Broths be made of the Decoctions of the said Simples; to which may be added, the filings of Steel, or the said Salts; afterwards Purge the Patient, which may be Succeeded by a Bath of lukewarm Water, which she may go into for ten or twelve days, and presently after it prescribe another Purge which is to be a Purging Opiat with Steel, and at last, if the Distemper continues, you must have recourse to the Mineral Waters: In a Word, all the Remedies prescribed in Obstructions of the Milt, Melancholy, Dropsie, are likewise proper here. If a Suppression of the *Menstrua* be joyn'd with the *Green-sickness*, it requires no other Cure, at least for the greatest part, than that which is due to this Distemper.

Copulation is Beneficial in both Distempers; for if the Suppression of the *Menstrua* happens to be without the *Green-sickness*, you must examine from what Cause it proceeds; for, if there be a Suspicion of Obstructions, it must be cured in like manner with the other; if it be produced from various Distempers of the *Uterus*, as has been said; it is to be removed by the Cure of them; if it proceeds from a bad Constitution of the Blood, and the want of a Ferment, it must be cured by Corroboratives, Spirituous, Volatile, and other Remedies, that are fit to redress the Blood. If a Superfluity of the Blood be the Cause

Cause, the Cure shall be performed by Bleeding chiefly ; first in the Arm, afterwards in the Foot ; in the *Menstrual* suppression, that comes from an Obstruction of the *Uterus*, a Fumigation of the Dross of *Regulus Antimonij*, as also a sudorifick Decoction are proper.

## C H A P. II.

### *Of the immoderate Flux of the Menstrua.*

**T**H E *Menstrual-Flux*, as it is sometimes suppress'd, is likewise often peccant in the Excess ; when either it lasts too long, and too much Blood is voided, or when it returns oftner than it should by the Laws of Nature.

The Causes of this immoderate *Flux* are ; either the Vessels of the Womb themselves, or the Blood : the Vessels are in Fault, when they are either tore or broke, by any violent straining whatever ; as Miscarriage, hard Labour, &c. but the Blood may be the Cause of this immoderate *Flux*, for many reasons : First the quantity and redundancy of the Blood it self can make that the Vessels of the Womb are more turgid, and they being once opened, the Blood runs out more copiously and longer ; so that the Vessels being widen'd by the copious Flux, and remaining so for a great while, cannot be shut again, but with great difficulty, especially when new Blood continually succeeds, and seeks the same passage ; whence the Flux must necessarily be immoderate : add that a Plethora may make a Rupture of the Vessels ; also, if the Blood be too full of the strong fermentative Particles, an immoderate Flux of the *Menstrua* will follow as long as the Agitation in the Blood lasts, by whose force some of its parts are disposed to the *Menstrual* Evacuation ; in the same manner, as the voiding of the excrementitious Humours lasts, as long as the agitation of the Blood, when it is caused by some Cathartick ; For there is no other difference between them, than that in a Purge, only some Particles of the Mass are by virtue of that Fermentation disposed to the evacuation ; and in the *Menstrual* Flux all the parts without Distinction, that compose the Mass, are voided ; the same quantity and quality of the *Menstrual* Ferment ; that



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is, according as it is more quickly gathered in the Mass in that quantity and force, as are requisite to raise the said Flux; shall also be the Cause that it returns oftner, than naturally it should; and this is chiefly the Reason, why some Women have naturally this Evacuation more than others; in the same manner, as the Ferment being deficient this Flux may likewise, as we have said elsewhere, be stopt; tho' the Blood be no ways wanting, and no Obstructions hinder it. *Thirdly*, The acrimony of the Blood may cause the same; for the Blood being too full of sharp Salts, hinders, or at least retards much the shutting of the Vessels; the opening of which continues the Flux. *Fourthly*, The Blood being too thin, and too much diluted with a serous Humour, or from what Cause soever dissolved, is able to prolong this Flux; as in the *Small-Pox*, the *Plague*, and *Malignant Fevers*, where it makes its way through the continual gaping Orifices of the Vessels, whence they cannot be heal'd up but with difficulty.

This Distemper wants no other Diagnosis; therefore we only called to mind the signs of the causes; if a *Plethora* produces it, you shall know it by the signs of a *Plethora*; if it proceeds from the excess of the Ferment, the Girl or Woman shall have it more frequently in the usual place, and the Blood shall be of its natural Constitution; the Signs that shew that this Flux comes from the Acrimony of the Blood are; the Blood being fill'd with Salt and sharp Humours, and that it comes away in too great a quantity, and with Pain; but if the Blood be serous, or dissolved, it shall appear such by that which is voided; and if a Dilaceration or Rupture has caused this Distemper it will be more manifest, from what is gone before, and the Relation of the Patient.

As to the Prognosis: Since all copious and lasting Hemorrhagies are dangerous, this cannot be counted otherwise; yet it is so, more or less, according to the quantity of the Blood that's voided; the duration of the Flux, the State of the Patient, and the Symptoms that proceed from it.

The Cure must vary according to the variety of the Causes, and several Indications, which are the same, whatever

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whatever the Cause may be, are likewise to be fulfill'd. First then, to make a Revulsion, after the injection of an emollient and cooling Glyster, which must be gentle: open a Vein in the Arm, which is to be repeated several times; then a gentle Purge with Adstringent or Lenitive Medicines is to be given, that the Blood may be freed from the Impurities it contains; and after that, if the Patient's Strength will allow it, Bleed again several times; yet in the mean time prescribe Remedies, that are able to thicken the Blood, if it be too thin; or to restrain its Agitation, if it be too violent, or to mitigate its Acrimony, and such as are adstringent. To this end exhibit Mornings and Nights Juleps, and Emulsions of cooling Thickning or Adstringent Remedies, as also Broths made with the same Plants, and such Remedies as Bole Armoniack, Seal Earth, and the Troches of the same, Franckincense, Mastick, Coral, Pearl prepared, and other things, which we have prescribed in the Cure of Spitting of Blood; if it proceeds from the Small-Pox, a Malignant Fever besides Astringents and Remedies that stop Bleeding, give those things that are said to be particularly proper in this Distemper; Opiates, Powders, and other Compositions. To stop the Flux of the Blood, the Juice of Plantain and Milfoil, either by themselves or mix'd, are recommended, or Syrrups may also be made of their Decoctions, with Sugar: Bathing is likewise used here; whether it proceeds from a Fermentation, which it lessens, or an Acrimony of Humours, which it is able to mitigate; you may take recourse also to Milk, if the Distemper be Obstinate, for that will mitigate the Blood, and preserve the Patient from the Consumption, which is threatn'd.

### N O T E.

'In the immoderate Flux of the Courses after Bleeding, and gentle Purges, the Hypocacua is very proper, of which is spoke in the Chapter of the bloody Flux: Then you must proceed to Thickning, adstringent, and Consolidating Vulneraries, as the Tincture of red Roses, and red Poppies made with some Drops of Water and Spirit of Sulphur: Spirit of Harts-horn, with, and without Acids, adding Coral, Ivory, Amber,

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the Grains of Kermes, Isinglas, Gum-arabick have the same effect, either by themselves, or added to compound Powders, of Coral, Japan Earth, Amber, Mastick burnt Alum, burnt Harts-horn, true Dragons Blood, Cuttle Bones, Sponge Stones, Balauftians, &c. To which sometimes you may add a very little Quantity of Opium, so that a fourth, or sixth part of a Grain comes to every Dose.

Preparations of Steel are likewise proper ; as also the Juices of Specifick Adstringent Plants ; as Nettles, Plantain, Mouse Ear, Cats Foot, Daisies, Self-heal, and especially the Vulnerary Herbs about Geneva, as Winter-Green, Ladies Mantle, Sanicle, Liver-Wort, Wild Betony ; and Lastly the use of Asses, or Cows Milk, either by themselves, or mixed with the aforesaid Juices and a Decoction of China and Lentiscinum ; externally they apply to the small of the Back, the *Regio pubis*, and the *Perinaum*, the Countess's Oyntment, and likewise the steam of Vinegar poured upon red Hot Iron is receiv'd in the privy Parts : Of the same use is the steam of Hot-water in which Salt Cod has been boyl'd ; as to the Diet let the Patients Eat Victuals of a good Juice, to supply the Loss of Blood, especially Yolks of Eggs with Jellys, of Capons, and the extremities of Animals ; Panado, Barley-Broths and other things, that restore the Blood its consistence, or intangle its Salts ; let them drink red Wine, mix'd with a great deal of Steel-water for their ordinary Drink.

## C H A P. III.

### *Of the Furor Uterinus;*

AS there are several Species of Melancholy, that have their Difference from certain objects, or thoughts, to which the Patients are addic'd ; so Madness in general ; which is a Desipiency with rage and no Fever ; may be Distinguished in several Species, according as the Errour, and Fury of the mind tends to Different things, and proceed from Different absurd thoughts ; such is the Distemper, which is called the *Furor Uterinus*, which

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which tho' it has borrowed its name from the *Uterus*; from whence, as its Primary seat, several Physicians derive it, belongs yet rather to the Brain as other Species of Madnefs; as being caused by the disorderly Motion of the Spirits in the Brain, as we have said of Madnefs; which disorderly Motion is the immediate, and nearest Cause of both, as we shall see: add that Men sometimes have been troubled with Distempers attended with the some Symptoms; by which it is Evident, that the *Uterus* is wrongfully accused in this Distemper. It may be defined a mad Delirium, Joyn'd with an unbridled Lust to Venery; where the Patients, whether they be Married Women, or Maids, throwing aside all shame, Talk obscenely, and furiously desiring Copulation invite to it whomever they meet: There are various degrees of it, as we have said of Madnefs, according as the Tempers differ: So those, that are Salacious, and of a hot Constitution are worse afflicted, and are more Raving Mad for Copulation; but in such, as are less Salacious, and of a Colder Nature, the Symptoms are more Remiss, which likewise depends upon the degree of the Morbifick Cause.

The Causes of this *Furor Uterinus* are not the Copiousness, or Acrimony of the Seed in the *Ovaria* and Vessels of generation as the Ancients thought; for, tho' their was Seed in Women, which yet is denied now a Days; there is no likelihood that the genital Parts turgid with Seed, or vellicated by the Acrimony, or Heat of it, should produce this Mad Delirium, and throw Reason out of its Seat; for what Relation has the Copiousness and Acrimony of the Sperm with the disorder of the Spirits in the Brain; in which the Delirium consists: I own that the Copiousness, and Acrimony of the Sperm may, by Tickling, and distending the genital Parts, Stir them up to venery; the Truth of which is manifest from Experience; but a Delirium can not proceed from thence; neither is it likely, that from thence their Reason should be so disturbed as quite to wipe out all shame and modesty, which is so natural to Virgins and Women, and that this Distemper is most Familiar to Virgins and Women, and such as are Married to Lazy Husbands, is no proof, that its nearest Cause



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Cause is the Copiousness, and Acrimony of the Sperm, which is common to those Subjects; for then Pollution, Copulation, Fasting, or other means, that Consume the Seed, would Cure them, which yet happens not; but it occasionally proceeds from *Ideas*, and thoughts, with which in consequence of a long Abstinence from Venery, the Patients are detained; by which the Spirits afterwards from some Cause or other suffering a disorder in the Brain, are more able to rouse this Idea of Venery, and produce a Venereal Madness; to which as I said before help not a little a sharp Hot, and Salacious Temperament, Ideas of often repeated Copulation, the Reading of obscene Books; the pleasant Allurements of Love, the absence of the Person beloved, Youth, and Hot Food.

The nearest Cause then of a *Furor Uterinus* is nothing else, than a disorder of the Animal Spirits in the Brain, as we said of Madness; to which disorder is Joy'd a change in the Consistence of the Animal Spirits, that is the Spirits are Thicker in their Bulk, more Alkaline, and consequently apt to make greater Concussions in the Brain, and stronger explosions in the Muscles; and because various Ideas, and thoughts of Venery, as we said already, Sprung from several Procataclytic Causes, are Joy'd with this disorder, the Fury tends rather to Venery, and the Act of Copulation, than any other Subject: Hence it is, that they speak loose, and obscene words, have Lascivious Eyes, a Wishfull Countenance, and that they are silent and sometimes sorrowful and Mad at the remembrance of Venery; hence it is, that the Pulse, and Respiration are altered; and that sometimes they Cry, and sometimes Laugh, and Talk Deliriously; at last the Morbifick Cause being more Augmented, the Women or Men afflicted with this Distemper openly invite all those about them to Copulation: All which Symptoms, making the *Diagnosis* of this Distemper, proceed from Venereal fancies imprinted in the Brain. It is to be observed, that Maids, Widows, and such as are Married to Lazy Husbands, are more Subject to this Distemper, than Men; because they have an Imagination, that is weaker, and more apt to receive Venereal Fancies; and because they love more violently, than Men,

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Men, and bear the Cares and Troubles of Love with greater Difficulty.

As for the Prognosis ; This Distemper is Curable if Remedies be timely applied ; but if it Perseveres, and has shot deep Roots, it is Difficult to be Cured, and turns to a real Madness : The greatest hopes of Recovery may be had, when the Intervals, after which it is used to return, (for it has also, as it were, its Paroxysms, and Periods) are long ; or that they are not agitated at the Remembrance of the thing.

The Cure is perform'd by Remedies of several Sorts : and first ; to say nothing of the Remedies prescribed in the Cure of Madness, which are all of use in this Distemper, as being a Species of it, and may be seen in its proper Chapter, in a *Furor Uterinus* all things, that are very Cooling are proper ; as the Leaves and Juice of Lettice, of *Agnus Castus*, Water Lillies, Purslain, the four greater Cold Seeds ; the Seeds of White Poppies, of which Emulsions may be made ; Whey taken for several days, Camphir, Conserve of the Flowers of Water-Lilles, Violets, *Agnus Castus*, Colewort, and Lettice Preserv'd ; Glysters are to be order'd, first sharp, afterwards Cooling ; Injections may likewise be prescribed for the Uterus, of Cooling Herbs with Salt of Lead, of Barley-water with the Juice of Nightshade, and House-leek ; or of whey. Copulation likewise, if it can be done Honourably, is very proper, and may be often repeated ; Lastly if Obstructions, and the Suppression of the Menstrua have brought this Distemper, use Aperitives,

### NOTE.

To what our Author has set down here, there is little to be added, only the Sugar of Lead ; and the Water of Chastity of *Senertus*.

## CHAP. IV.

### Of the Hysterick Passion.

WE have given an Idea of this Distemper, when formerly we treated of the Hypochondriack Melancholy ; from which it differs so little, that *Sylvius*, and likewise *Willis* take it to be the same Distemper ;

temper ; which not without Reason they have done, because of the Similitude of the Symptoms. It is called the *Hysterick*, or *Uterine Passion*, because the Authors that first Writ about this Distemper, thought, that the *Uterus* was Principally affected in it ; and tho' not only very grave Authors Witness, but experience has also often taught us that Men may be afflicted with the like Distempers, yet it commonly invades Maids, Widows, Married Women, and often when they are with Child, nay Old Women more, than Men ; because of their sedentary, idle Life, and Cold and Bad Food, nay sometimes Trash, which they use, which makes 'em more Subject to the gathering of Bad Humours in the first Passages, and a Cacochymy, as also Obstructions of the *Viscera* ; whence it follows, that the separations are not so well performed, and so the Blood is more easily infected, and more apt to produce Distempers ; than in Men, that employed in Exercise, Working, and Watching can not gather Bad Humours in such a Quantity, or so soon ; but tho' the *Uterus* is commonly innocent, as is manifest from the many Corps, that have been open'd of *Hysterick* People, in which no fault of the *Uterus* was to be seen ; and consequently is not to be called the first Origin, and Root of this Distemper, and six Hundred more Miseries, as *Democritus* writ to *Hipocrates* ; yet it is not always Blameless ; and, tho it Principally proceeds from a fault of the Blood, and Spirits, and not from the *Uterus*, yet it is fomented and sustain'd by a fault that is in the *Uterus*, as well as the other *Viscera* ; which is plain by the Suppression, or insufficient Evacuation of the *Lochia* or Child-Bed purgations and the *Menstrua*, which commonly occasion the *Hysterick* passion : This is proved likewise by Remedies apply'd to the Region of the *Uterus* or given in form of Fumigation, which commonly Cure the *Hysterick* Fit ; add that the *Uterus*, being of a Loose and Spungious Substance, especially in those, that have born Children, can soon gather Bad Humours, that by Stagnating deprave the Blood yet more, and give it a Bad Disposition, that is able to produce the *Hysterick* passion ; of which, when we treat, we mean not one, but a whole Army of Distempers ; that is a Disease, which is not only used to produce a Suffocation,

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focation, but also Headaches, Vertigo's, Convulsive Motions, Palpitations of the Heart, Rumblings, and Agitations of the Stomach, and Guts, Difficulties of Breathing, or Abolitions of the same, as well as of the Pulse, and External and Internal Senses, the *Hickup*, &c. all which Distempers of the Women, tho' by several Authors they are proposed under diverse Heads, which seems superfluous; I shall only call by the name of the *Hysterick* passion, and comprehend in one Chapter; as having the same Causes, either more or less intense, or accumulated in various Parts of the Body, and being Cured by the same Remedies.

In the mean time it is to be observed, that this Distemper is not equally Violent in all, nor always attended by the same, or the same number of Symptoms; sometimes the Suffocation, and Difficulty of Breathing are but slight; sometimes the Senses, and Use of the Mind Remain; sometime they Lose Sense and Motion, and like Epilepticks fall down to the Ground; sometimes they Foam at Mouth; sometimes there are Convulsive Motions only in the Internal, but at other times, they are extended also to the Limbs, and external Parts; now the Respiration is taken away, then it is only Difficult; now the Pulse appears, and then it is not to be felt, &c. according to the Quantity and Force of the Morbifick Matter, or its presence in diverse Parts of the Body. It is to be observed also, that this Distemper, as we said before of the Epilepsy, is used to return by Fits; which are long or short, frequent or rare, according to the quick, or slow gathering of the Morbifick Humours; for these Humours, or Particles in our Bodies have, like in intermittent Fevers, their times of Digestion, accumulation, and exaltation; which as soon as they are come, they suddenly, and, as it were in a Moment, are put in Action; or these Humours may likewise Skulk in the Body, destitute of Motion, and agitation, or intangled; till by some external, or Procatartick Cause they are agitated, and set to Work; who sees not from what has been said, that the Nature of this Distemper approaches so near the Hypochondriack Melancholy, that it can hardly be distinguished from it? And what Man of Sense can examine the Symptoms that are usually seen in both Distempers;



temper; but must confess, that they are owing to the same Causes, and to be Cured by the same Remedies? Yet they seem to me to be more in the Right, that refer the *Hysterick* passion to an *Epilepsy*, of which they think it to be a Species, and not without Reason. The *Hysterick* passion then is a Distemper of the Spirits, and *Genus Nervosum*; as appears by the Symptoms, which commonly attend it; not unlike the Symptoms of an *Epilepsy*, which returns also by Periods; and especially in that sense of Suffocation, and Strangulation, which cannot but proceed from a Convulsive Motion of the Parts of the Larynx and Pharynx; as we shall see.

The Immediate Cause then of the *Hysterick* passion is not the Retention, Putrefaction, and Corruption of the Seed, Menstrual Blood, or other Humours in the Womb, as the Ancients thought, for why should these Humours; that by acquiring a Malign Quality emit Malignant Vapours, that are to be carried to all the Parts of the Body, that have any Communication with the Uterus; and Consequently are fit to Produce Innumerable Symptoms; I say, why should these Humours not rather Produce a *Furor Uterinus*? Besides that there is no Passage through which these Vapours can be carried to all the Parts, It cannot be explain'd, which way these Vapours, which are but Wind, should cause a Suffocation, the *Hickup*, a Palpitation of the Heart the Abolition of Sense, and Reason, and other Convulsive, and disorder'd Motions of the Spirits; and it is not Sufficient to say they are malign, unless it be explain'd in what that Malignity consists; besides, if the retention of the Seed and Menstrual Blood; tho' that there is Seed in Women is not yet agreed on; was the first Cause of this Distemper, it would follow, that all Menstrual Suppressions must be attended with the *Hysterick* Passion, which yet is false by Experience, Nuns likewise; and other modest Virgins, because of their abstinence from Venery, and consequently the Retention of the Seed, should be more subject to the *Hysterick* Passion than others, which yet happens not: Add, that most *Hysterick* Women have their Menstrual Purgations exactly, and in due time, and that many of them use Copulation frequently; in such at least the Retention of the Seed, and Menstrual Blood cannot be the Cause of the Distemper.

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To say nothing of the Reason alledg'd before, viz. that Experience taught us, that Men had been subject to this Distemper, and that in the Defunct the Uterus was commonly sound, and without any Fault; all which proves openly, that the Retention of the said Humours is not the immediate Cause of the *Hysterick* Passion. Tho' as I said before, when there is otherwise this Constitution of the Blood, that is apt to produce this Distemper, the Retention of the Seed, or other Humours in the Uterus, and their long stay there, are able to dispose the Body to this Distemper; for then these retain'd Humours are as the Occasional Causes, no otherwise than in the Hypochondriack, the Hemorrhoids, that use to run periodically, when they are stop't up.

But the true legitimate and immediate Cause, if the Distemper be of the Epileptick sort, as no body can doubt, can be nothing else but a slow and tough Constitution of the Blood, as Melancholy and Hypochondriacal People, which are most subject to this Distemper, use to have: and how this, because of its *Heterogeneity* with the Spirits, which are *Salino-Volatile*, produces Convulsive Motions, has been said sufficiently in the Chapters of the Hypochondriack Melancholy, the Epilepsy and Convulsion: for since this Blood is overcharged with Particles, *Heterogeneous* to the Spirits, they are either together with the Spirits strained in the Brain, or by the Blood thrown immediately upon the Parts, where meeting with the Spirits, they provoke them to preternatural Explosions and Disorders; whence come *Vertigo's*, Palpitation of the Heart, difficulties of Breathing, Head-akes, Pains of the Stomach and Guts, contractive Motions, the Abolition of the Respiration, by reason of the Convulsion of the Midriff, &c. Those Grumbings and Croakings, that are made in the *Abdomen*, proceed not only from the Agitation of the Guts, but also from the various Humours express'd by those Motions; as the Pancreatick Juice, the Gall, or other, flowing from the Arteries into the Cavity of the Guts; and because of the *Heterogeneity* of the Acid with the Alcali, making an Effervescency: But because we must come again to the explications of the same *Phenomena* and Symptoms, which we observed in the Chapters of the Hypochondriack Melancholy and Epilepsy, I refer you to those two Chapters, where you shall find a large Explication of all the Accidents

dents that are commonly observed in the Hyfterick Passion, Hypochondriack Melancholy and Epilepsy. There are two Symptoms most properly belonging to the Hyfterick Passion, that want a peculiar Explication, *viz.* The Sense of Strangulation and Suffocation in the Throat; which several of the Ancients deduced from the rising of the Womb, squeezing the Stomach, Midriff and Lungs, which is contrary to Anatomy; for the Womb, so firmly kept by its Ligaments, cannot ascend; and tho' *Fernelius* asserts, that he has touch'd it about the Navel, and reduced it to its place, I must beg his Pardon for not believing him; for the *Testes* or the *Ovaria* of the Women, which he thinks that Ascend, and not the *Uterus*, are fix'd to the sides of the Womb; nor can they be removed from thence so easily, and be carried to the Navel, or higher; wherefore it is better to believe, that as we said in the Hypochondriack Melancholy, this Suffocation, since it happens as well in Men as Women, proceeds from a Disorder of the Spirits; running from the Stomach through the *Oesophagus* to the Muscles of the *Larynx* and *Pharynx*, and pulling the same; whence follows, the Stoppage of the Passage of the Air: The other Symptom, peculiar to the Hyfterick Passion, is the Abolition of the Respiration for some Days, yet without the Death of the Patient: This *Galen* deduces from that in this Case they are not moved so much, the Heart grows cold, and consequently, that the Respiration is not so much wanted; which if it should be hinder'd, where the Motion and Heat remain, Death would certainly follow; because then it is necessary; this is the final, but I shall give the Philosophical Reason. The taking away of the Respiration depends upon a Convulsion of the Midriff, descending to the lower Parts, and remaining in that State; in which State it hinders in some manner the Falling, and digression of the Ribs, that are elevated, to which it is tied: These Hyfterick Patients remain in this State alive; because the capacity of the Breast being Dilated, the Air must enter into the Lungs, which Air being robb'd in the Lungs of its nitrous Particles, that augment its Gravity, grows lighter; whence it ascends by its lightness through the Wind-Pipe; whilst the more heavy Air, coming from abroad, descends by its Gravity; whence there is a continual ascent and descent of the Air; which tho' it furnishes

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not a sufficient quantity of *Aereous Nitre*, to make great Motions, is yet able to maintain a gentle Attenuation of the Blood, a small Systole of the Heart, and consequently Life. The Pulse being diminished, and hardly to be felt; which together with the Abolition of Breathing has been the occasion, that Hysterick Women have been thought Dead, and Buried as such, which afterwards came to Life again; proceeds from a very Feeble Systole of the Heart, or a defect of the *Aereous Nitre*, which helps not a little to its Motion, as I have often intimated.

Tho' this Distemper is sufficiently to be known from what has been said; yet its Diagnosis will be more plain, if we give the Signs, as well that go before, as those that are in the Fit. Of the first Class are Grumbings in the *Abdomen*, a Distention and Pulsation in the Back, and Hypochondria; Belching, Nauseating, Gaping, and Stretching. To the Second Class belong the aforesaid Sense of Strangulation and Suffocations, as if a Ball was a-swallowing; the Respiration intercepted, the Depravation and Diminution or Abolition of the vital and Animal Functions, afterwards Deliriums, Convulsions in the Face and Limbs, sometimes all over; sometimes an Agitation of the Breast, an Abolition of the principal Faculties of the Brain, a turning of the Eyes, an Obscure and insensible Pulse, &c. the Explication of which may be had from what has been said already, or deduced from those things that are related in the Chapter of the Epilepsy and Hypochondriack Melancholy: But when the Hysterick Fit goes off, there commonly issues some moisture out of the Privities, occasioned by the Constriction made in the Uterus, as well as other Convulsive Parts; the Cheeks which were Pale before, are now Dyed with red, because the Motion of the Heart is augmented, the Eyes are opened, and the Animal Functions are restored, because the Disorder of the Spirits ceases, and the Faculties of the Soul abolished are renewed again; for the same reason the Body which was commonly cold before, grows warm, and the preceding defect of Air is compensated with great Inspirations and deep fetch'd Sighs, and so the Patient comes again to himself. This Distemper is distinguish'd from a Syncope; first by the Duration; for a Syncope lasts not long, but the Hysterick Passion continues a Day, or many Hours,



may sometimes several Days: Secondly, the Syncope invades the Patients suddenly, without any of those foregoing Symptoms which the Hysterick Passion has: Thirdly, the Paleness is greater in those that are afflicted with a Syncope, than those that are Hysterick, in which is sometimes a Redness: Fourthly, there is a cold Sweat in a Syncope, which is not in the other: Fifthly, in a Syncope the Pulse is totally abolish'd, and commonly but diminished in the Hysterick Passion. It differs from an Apoplexy in that the Parts are not so much affected, nor their feeling so much abolished; for when they are prick'd or pull'd they feel it; that there is not a continual Snooring, and that the Pulse is diminished and depraved, which in an Apoplexy most commonly remains intire: it is known also by the Rumbings and Croakings, Convulsive Motions of the Internal and External Parts, and other Symptoms, that either go before or accompany it; all which are not seen in an Apoplexy: if a Syncope be joyn'd with, or an Apoplexy comes upon an Hysterick Passion, then indeed it is difficult to distinguish it from these Distempers. Lastly, a certain Diagnosis, or a distinction of this Distemper from the other, *viz.* the Syncope and Apoplexy is made by the frequent Signs: If the Patient has been troubled with Hysterick Fits before; and if fetid Stinks being applied to the Nose, she finds ease, and the Distemper be increased by fragrant Smells; if the Application of them to the Nose, and Privities be equally offensive; for there is, as we have said in the Hypochondriack Melancholy, in sweet Odours a very thin and volatile Sulphur, combined with a Salt of the same Nature, which when it penetrates the Nostrils and Body, or the Privy-Parts and the Womb, is able by its Mobility to raise a Tumult in the Spirits; but the fetid Particles have a thick Sulphur, acuated with a Salt, that ties and intangles the Spirits more; and can by reason of the Irritation of the Nostrils appease the Disorder of the Spirits, as it is with all things that are able to create a Pain and Irritation. The Authors have not done well to distinguish this Distemper from an Epilepsy; as also from an Hypochondriack Melancholy; because as is manifest from what has been said, they are Distempers so nearly related and allied, that they are owing to the same Causes, and cured by the same Remedies: Yet, what is properly

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properly call'd the Epilepsy, is used to be more universal, and convells most commonly the External Parts and Limbs; but the Hysterick Passion often invades the Internal Parts only: In the Epilepsy there appears always Froth at the Mouth, which seldom happens in the Hysterick Passion; but these Differences are merely Accidental, and these Distempers differ only in the Species. *Riverius* proposes Signs to distinguish Hysterick Patients from those that are Dead, and not without reason; for, as we said before, some have been counted Dead, and put into the Grave, as Histories Witness; wherefore it is not prudent to Bury them before the Third or Fourth Day, when they begin to smell: to try then whether they be Dead, they hold some Lint, Feathers, or burnt Paper to their Mouths; and if they are moved, it is a sign that the Patient breaths yet; others set a Glass of Water upon the Breast, which if it be stirred, shews, that there is some Dilatation and Motion in the Breast; others hold a Looking-Glass well wiped to their Mouths, which if infected, shews that the Patient is alive still.

We need not relate the External and Procatartick Causes of the Distemper; they are fetch'd from the Abuse of the six unnatural things, and are the same that were alledg'd in the Hypochondriack Melancholy.

As to the *Prognosis*; this Distemper seldom kills the Patients; yet sometimes it snatches them away, when the *Paroxysm* is intense, and lasts very long, or draws in an *Apoplexy* or *Syncope*. Of the several degrees of the *Hysterick Passion*, that is the worst, in which many Parts suffer Convulsions, and the Exercise of the Senses is interrupted; but that is flightier where the Mind is untouch'd, or the use of it not taken away, and but one or two Parts are Convulsed, especially if the vital Functions remain intire. In Ancient People it is hardly Cureable, because then the Habit is contracted: in young Women it sometimes ceases of itself, as they grow in Years, or when they begin to have Children: *Hysterick Fits* are dangerous to Women with Child, and in Child-bed; to the first, for fear of Miscarrying; and to the other by reason of their Weakness got in Labour. Sneezing in the Fit is a good Sign (says *Hippocrates*); because it shews that the Midriff desists from its distension, and depression, and consequently that it hinders

The Respiration not so much. The *Hysterick* Passion requires, as I said of the *Epilepsy*, a double Cure; one in the Paroxysm; especially when it is violent, and of a long Duration; and another when the Fit is off. In the Paroxysm make use of hard rubbing in the lower Parts, Scarified cupping on the Back; and the same without Scarification on the Hips: They recommend likewise the pulling out of the Hairs, the twisting of the Fingers; Vociferations, Fetid things held to the Nose, Galbanum, Asa Fœtida, Feathers or Leather burnt, Brimstone lit, the Smoak of Tobacco, Rue; as also sharp Snuffs of White Hellebore, Euphorbium; sharp Glysters are to be injected of the Decoction of Feverfew, Mugwort, Rue, Penny-Royal, Mercury, with Hot Seeds, adding Diaphenicon, the Pulp of Coloquintida, the Blessed Laxative, yea the same of Emetick Wine. To be taken at the Mouth you may give Emeticks; Castor, and its Tincture, Laudanum, the Narcotick Syrup, Camphir; Bleeding also, whatever others say, may be safely Administred; viz. when the Motion of the Heart fails not, and the Face looks Red. The Water of Water Lillies and of great Burr is proper in Juleps; the Warts that grow on Horses Legs, dry'd in an Oven and powdered, and afterwards by way of Fumigation applied to the Nostrils, is taken for a Specifick in the *Hysterick* Fits. But the Plaisters, Oyls, and other External Applications to the Abdomen are of no, or very little effect; but the Fumigations for the Privy Parts are of greater Virtue; and so are all Fetid things, that by their Sulphureous Particles tie the Spirits; yet take heed of giving Remedies that are too strong, to Women with Child, as also of Medicines that might deject the Strength to Women in Child-bed: when the Fit is off, the same manner of Cure is due to this Distemper, as is owing to an *Epilepsy*, or *Hypochondriack Melancholy*, which therefore we shall not repeat here: Yet it is to be observed, that your Hot and Sulphureous Mineral Waters, Fetid Pills, the use of the *Hysterick* Waters, prescribed in diverse Dispensaries, as also the Analeptic Waters, a Decoction of the Roots of Briony, Vitriol of Mars, and Cremor Tartar, are much recommended; with many other Remedies, that are called Specificks, and may be seen in the Authors; if in the mean time Obstructions, or the Suppression of the *Lochia* foment this Distemper, use their proper Remedies.

N O T E.

‘ Being of the same Opinion with our Author, *viz.* that  
 ‘ what is call’d the Suffocation of the Womb, belongs to the  
 ‘ Convulsive and Hypochondriack Distempers, we have little  
 ‘ to Remark here; see above the Chapters of the Convulsions,  
 ‘ and the Hypochondriack or Melancholy; read likewise what  
 ‘ has been said of the *Apoplexy*, and other Sleepy Distempers;  
 ‘ because there you may meet with Medicines to rouse Patients,  
 ‘ and other Remedies, that are used in the Poroxysm of a Suffocation of the Womb.

C H A P. V.

*Of an Inflammation of the Uterus.*

AFTER the *Hysterick Passion*, of which we have now treated, to observe the Order of *Riverius*, follows the Inflammation, Imposthume, Ulcer and *Scirrbus* of the *Uterus*: But because these Distempers have not a difficult *Ætiology*, and are produced the same way as the Inflammations, Imposthumes, and *Ulcers* of the Stomach, Liver, Kidneys, and other Parts, of which we have largely discoursed already, we should seem to act the same thing over again, if we should spend any time in explaining their Nature, and assigning their Causes. Wherefore I shall think it sufficient here to propose some peculiar Diagnosticks of these Distempers, and to take notice of some things concerning the Prognosis and the Cure, that have not been said before.

The Signs then, that shew an Inflammation of the *Uterus*, are a Tumour, Pain, and Heat in the Region of the *Uterus*, that is in the lower Belly, all which proceed from the Inflammation made in the Substance of the *Uterus*, Distending, Elevating and heating the Membranes of it; besides in those that should have the Menstrual Purgations, the same are stopt or diminish’d: for at the time when they should flow, the Inflammation is made, which proceeds from Blood, that by an Obstruction is forced to extravasate, because it cannot freely pass through the Ordinary ways; there is also a lesser quantity of the Menstrual



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Blood, and the Evacuation of what is voided is Painful; because the *Uterus*, which to void it must be somewhat contracted, squeezes the inflamed Part, and so Augments the Pain, sometimes there is no Blood voided, but only some thin and putrid Matter or Serum; by reason of the Obstructions which only allows thin Humours to pass. There is likewise a Fever, for the reasons alledg'd before: If the whole *Uterus* be Affected, all the Symptoms will be more violent; if the Inflammation is in the Neck of the *Uterus*, the Pain and Heat will be extended lower towards the Privy Parts: If the fore part of the Womb be inflamed, the Bladder shall participate of it; and if the hind part be Affected, the strait Gut shall suffer by it; for the *Uterus* lies in the middle, between the Bladder and strait Gut; and if it invades the right or left Side, the Pain and Swelling will be observed in the Side Affected, and a Heaviness is felt in the Leg: If the Respiration be disturb'd, it is because the downward Motion of the Midriff is hindered; if the Inflammation be suppurated, the Pain and Fever shall increase, there will be a Shivering, and all the other Symptoms will be more severe: the Suppuration being made, all the Symptoms will be mitigated, because the Inflammation in the Part is ceased, and the Swelling of the lower Belly will not be so hard; but if the Distemper goes off without Suppuration, by way of Solution; then the Symptoms lessening by degrees, the Tumour shall be diminished, and the Fever shall cease successively; if at last the Inflammation turns to a *Scirrhus*, the Fever, Pain and other Symptoms will cease; the Swelling continuing, and growing harder, and then the Weight and Heaviness in the Womb shall remain likewise. The Inflammation of the strait Gut and the Bladder are distinguish'd from that of the *Uterus*, by their proper Signs; but especially by the Urine and Excrements, and the difficult voiding of either. Before I proceed to the *Prognosis*, I shall intimate that besides the internal, and external Causes, common to other Inflammations, this Distemper has likewise other Procatarrick and Peculiar Causes; as immoderate Copulation, sharp Applications to the Privities, a hard Labour, Miscarriage, troublesome Child-bearing, Violence sustained from the Midwife, the Suppression of the *Menstrua*, Cupping upon the *Regio Pubis*; for they are all things

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things that are apt to draw the Blood toward the *Uterus*, or to retain it in the Substance of the same.

As to the *Prognosis*: It is a very dangerous Distemper, and most commonly Mortal; yet more or less, according to the magnitude of the Distemper, the Cause and Symptoms: If the whole *Uterus* be Inflamed, it is of a very bad Omen, it is likewise to be counted very Dangerous, if this Distemper Afflicts Women with Child, because then it turns easily to a Gangrene, by reason that the Blood is apt to stagnate and stay in the *Uterus*, which being of a loose Contexture, is as it were, the Sink and common Sewer of bad Humours, that Suffocate and extinguish the natural Heat and Fermentation of the Blood: besides this Distemper is commonly, and oftner than other Inflammations, attended with Deliriums and Convulsions; because the bad Humours are carried to the Brain and Muscles, which very much Augment the Danger. Coldness of the Extremities and Cold Sweats are Signs of approaching Death; when the Inflammation Suppurates, there is hope of an Imposthume, which when opened, by the Efflux of Matter breeds an Ulcer. The Matter either flows inwardly into the Cavity of the *Uterus*, which is better, because then it is Evacuated out of the Body, or outwardly into the Cavity of the lower Belly, which is worse, because then the Matter is retained, and there is nothing to be expected, but first a *Consumption*, and afterwards Death, especially when the Ulcer is large; which commonly happens not when the Imposthume opens toward the Cavity of the *Uterus*, because then the Matter is Evacuated, and the Ulcer is easily cleansed by Injections.

The Cure here is the same as in other Inflammations, only with this difference; that, because of the Vicinity of the Strait Gut with the Womb, Cooling Glysters, even of Oxycrat, are to be oftner injected; and a Vein is to be open'd in the Arm, rather than in the Foot; that injections be made with the *Metrenchytes*, or Syringe for the Womb, if it can be done with ease; that no Vomits be prescribed; because they exasperate the Distemper; the *Pessaria*, or Remedies put into the Privy Parts, which *Riverius* prescribes, are not much approved off; because they rather promote, than hinder the Flux of the Humours toward the *Uterus*.

## C H A P. VI.

*Of an Imposthume of the Uterus.*

**I**F a Suppuration begins to be made in the *Uterus*, it must be helped, as we said of other *Imposthumes*, that come in the Liver, Stomach, &c. by Plaisters, and outward Emollient Cataplasms; if it Breaks not, its Rupture ought to be promoted; if it can be done without any harm; by Snuffs to make the Patient Sneeze; a Motion of the body, &c. after that it is an Ulcer; of which we have spoke, &c.

## C H A P. VII.

*Of the Whites of WOMEN.*

**T**HIS Distemper manifests it self sufficiently by the name; for it is nothing else than a Flux of Excrementitious Humours, that are serous or Pituitious, and very little stain'd with Blood, through the Privy Parts of *Women*; which is either continual, and without Intermission, or used to return after some Intervals, yet without order or certainty; these Humours, tho' they are serous, and mixed with a red, yet vary commonly, as to their colour; for sometimes they are *White*, like whey, or Barley Cream; sometimes they are Pale, Yellow, and Green, viz. when the Gall being more, or less exalted is mixed with it: They are also sometimes sharp, and Corroding, that is too much impregnated with Salts; so that, flowing through, they exulcerate the Parts of the Womb. Sometimes they are gentle, and Temperate; sometimes Stinking, and of an ill Scent; sometimes they have no Smell at all: Married Women, and those of riper Age, are more subject to this Distemper, than young Girls, or Virgins; which yet are not free from it, tho' they are seldom troubled with it. The Reason why Married Women, and those of riper Age, are more subject to the *Whites*, than others, is the Looseness of the

*Uterus.*

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*Uterus*, and the bigness of the Vessels; by Reason of which the Humours are carried in greater Quantity to this Part; or are more apt to Stagnate, when brought to it; which happens not so easily in Girls, and young Virgins; because the Substance of the *Uterus* is firmer, and the Vessels are narrower in those Parts; tho' Authors have observed, that it happens sometimes: some are of Opinion, that these Humours, voided through the *Uterus*, because they are commonly *White*, are Chyle; that through the Arteries is brought to the Body of the *Uterus*; which afterwards is strain'd, and separated through its Substance or the *Glandules* of which it is composed, as other Liquors are usually separated; the reason of which they deduce not only from the voiding, or Colour of the Humours; but also from that such a Humour is Strained through the Body of the *Uterus*, and the *Placenta Uterina*; when the Child is contained within the Womb; which likewise is Whitish; and call'd the *Colliquamentum*, that serves the Child for Nourishment. But this Hypothesis can not be maintain'd; because the *Whites* usually trouble none, but Women, that are Cacochymick, and indisposed; and whilst it lasts the Patients are not Consumptive, which yet ought to follow: add that it is not Chyle by the Colour; for what is voided looks commonly Pale and Greenish; nay Stinks, and is sharp sometimes, which can not be said of Chyle: Moreover the *Glandules* of the *Uterus* can not separate the Chyle, or Chylous Matter from the Blood; but when *Women* are with Child, and that by the help of the *Placenta Uterina*; for if this Chyle could be strain'd through at other times, when they are not with Child, why should it not always? No less are they deceived, that take these *Whites* to be Matter; for Matter can not proceed but from an Ulcerated Part; and as we all know it is produced from Extravasated Blood; yet no Ulceration, no Ulcer infects the Womb in this Distemper: there are others, that think, that these Humours are sent sometimes from the whole Body; sometimes from some Principal Part; as the Brain, the Stomach, the Milt, the Liver, &c. into the *Uterus*; but since there is no passage from Parts to Parts, and that whatever Humours are Lodg'd in any Part, they are all derived from the Mass of Blood; we need



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to seek no other Origin for these Humours, but the Blood it self, which in this Distemper is not of its natural Disposition ; but serous, and Cacochymick, and apt to Stagnate in the Parts, especially the *Uterus* ; which, because of its Loose Contexture, and Spongiuous Substance is the Sink of the whole Body ; which Blood being distitute of its active, and Volatile Particles that used to raise that Periodical Fermentation of Humours on which the Menstrual Purgation depends, can not sufficiently unlock, and open the usual passages of the Womb ; whence only what is thin, and serous slips through ; the more because the Womb being stop't allows no free passage of the Blood from the Arterys into the Veins ; whence that, which is Thin must necessarily Jump out, and Transudate ; which because it has a Lympha, or the Gall mix'd with it, and dissolved in it, is sometimes Whitish, and sometimes Yellow, or Greenish, especially when it is Thicken'd a little by staying in the *Uterus* ; but if it be too full of Salts, or sharp Gall, the Blood being filled with them, it gets an Acrimony and sometimes a Stink, if by a long stay it contracts a Putrefaction ; as Spot does in the Nostrils.

The External and Procatastick Causes, that may occasion this Distemper, are all those things that are used to create Cacochymick, and weak Blood ; and to relax the firmness of the *Uterus* ; such are Cooling things, the excessive use of fruit, a deficient Concoction of the Stomach, an Obstruction of the *Viscera*, a debility of the *Uterus*, contracted by Agitation, Difficult Labour, Miscarriage, or Contusion ; Cold taken in the Womb ; an Idle, and sedentary Life ; and therefore Country Women, that use much Exercise, are less troubled with this Distemper, than others. This Distemper is known not only of it self, and by the Humour voided ; but also by various Symptoms that attend it ; as Paleness, Inappetency, Difficulty of Breathing, loss of Strength, a Swelling, and Inflammation of the Eyes, Weariness, &c. which have all the same Causes ; as are related in the Greensickness, and the Suppression of the *Menstrua*, wherefore we shall not here repeat them : Besides the *Whites* are Distinguished from other analogous Distempers ; viz. an Ulcer of the *Uterus*, and the *Vagina*, and a *Gonorrhœa* ; not only by the peculiar Signs of those Distempers, to be set down  
here

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hereafter ; but also by that the Matter, which is voided in those Distempers, flows in less Quantity, is Thicker, and has longer Intervals ; sometimes it is mixed with streaks of Blood, or is Bloody, and voided with Pain ; likewise in those Cases the *Women* cannot bear Copulation, but with Pain, all which things are not observed in the *Whites*.

This Distemper is not mortal, and consequently not very Dangerous ; yet it is Stubborn, and Difficult to be Cured ; because of the ill Mixture of the Blood, which cannot be so easily corrected ; and the Obstruction, and Weakness of the *Viscera*, and *Uterus*. That which is newly come is sooner Cured than that which is inveterate, which commonly Breeds more and worse Distempers ; as the falling down of the Womb, a Cachexy, Dropsy, Consumption, Sterility ; if the Humour, that is voided be fetid, it is a bad Omen ; because it shows a very great Corruption of Humours ; the same may be said, if it be so sharp, as to exulcerate the Parts it flows through. As to the Cure : It is performed almost by the same Remedies, as are prescribed in the Greensickness, and the suppression of the *Menstrua* ; first in regard of the Cacochymy Purgatives are exhibited ; and then in respect to the Obstructions opening and attenuating Remedies are used : For the Debility of the Strength, and the decay of the Functions in this Distemper, prescribe Corroborative, spirituous, and volatile Medicines. As for Bleeding ; Partly, because of the debility of the Strength, and partly, because the Blood's fault lies in a *Cacochymy* more than in a *Pletthora* ; it seems to be of no use here ; therefore opening, and Purging Apozems, prescribed in the Cure of Obstructions, the Dropsy, Melancholy, &c. are proper here ; also Broths with Aromatick and Aperient Roots, with fixed and volatile Salts, Corroborative Confections ; *Venice Treacle*, Saffron, spirituous Mixtures, volatile Liquors and Spirits of Soot, *Sal Armoniack*, Wine, Blood, Urine, &c. Sudorifick Decoctions ; always administering Pills of *Hiera Picra* between whites, with Resin, and the Powder of Jalap, the Powder of Diacarthamum, Rhubarb, Agarick, Senna, or other Purges in the form of a Bolus or a Potion ; Chalybeats are likewise beneficial ; Hot Sulphureous Mineral Waters, as well for inward Use,

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as Bathing ; a Bath of an Aromatick Decoction, a Fumigation for the whole Body of Wine or Brandy, that Hot Bricks are thrown in to, or a Decoction of the Dregs of *Regulus Antimonij*, Lastly Mineral Waters or Whey with Fumitory, Wormwood perfect the Cure : Causticks to the Legs, Rubbing, Ligatures, Cupping, &c. which *Riverius* proposes, are of no Use : Yet the Stomach, which is commonly in fault, as Furnishing, by its ill Chylification, the Blood with the crude Morbifick Juice, ought to be Strengthened by proper Remedies, and discharged of its Stagnating Humours ; therefore, if the Patient's Strength, and Constitution will allow it, Vomits are very useful, either of Lukewarm-water, Salt of Vitriol, or Antimonial Medicines, in their proper Doses ; Corroboratives of the Stomach ought to succeed the Vomits, as Worm-wood Wine, the Opiat of *Salmon*, Digestive Powders, Conserve of Roses, Sweet-Briar, Lemon-Peel, Myrobolans preserved, Coral, Pearl, &c. a Decoction of Oak Leaves with a Dram of the Chyle that's in the Stomach of a sucking Hare, is recommended in this Distemper by *Mercurialis*, who asserts that he has seen many Women Cured by it ; Others add Adstringents, if the serous Humours flow in a considerable Quantity. As to outward Applications, Fomentations of Aperient and Hot Herbs, a Decoction of Wine only, or of attenuating Herbs boiled in Wine ; a Decoction of Wormwood, Ferverfew, Mugwort, &c. Fumigations of the abovementioned Herbs, or Frankincense, Cinnabar. Let their Diet be Victuals of good Juices, and an easy Digestion ; shunning all Gross, Crude, and indigested Food ; their common Drink must be light Wine, or Chalybeate Water.

### N O T E.

Our Author seems to confound the *Whites* of Women with the Discoloured Courses, and all most all, what he says, as well of the *Diagnosis*, as the Cure in the first Distemper, is Suitable to the latter ; the *Whites* are by some called the spurious Gonorrhea of Women, to distinguish them from the true Gonorrhea, or a continual, or at least frequent Running of that Humour, which Women void in Copulation ; which is divided again in Benign, and Malign, or Venereal ; the spurious and true Gonorrhea agree in this, that the Humour

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Humour, used to flow in either, runs from the Glandules of both the *Uterus* and the annex'd Parts; only with this difference, that in a real Gonorrhœa those Glandules seem only to be opened, that are about the internal Orifice of the Womb, and that Analogous to the *Prostata* in Men, are emptied through the Pipes, or blind Passages opening toward the extremity of the Privy Parts; but in the Spurious Gonorrhœa all the other Glandules, as well in the inner Tunick of the *Uterus*, as in the Vagina it self are affected, distended by the Copiousness, or Acrimony of the Lympha, and relax'd, they Lose their firmness, are Stimulated, cleansed, and sometimes slightly Corroded.

Of the real Gonorrhœa we shall say more in the Treatise of Venereal Diseases: As to the Spurious Gonorrhœa, its Matter comes immediately from the Cavities of the *Uterus*, described by the famous *Malpighius*, the Lymphatick Vessels, and Glandules, of which hereafter: The Arteries are the primary Spring, from which this Matter is derived; which is nothing else but the serous, raw, and Chylous Part of the Blood; with which Part of the Gall, and other Humours, as also the Salts are mix'd. This Flux differs from the Discolour'd *Menstrua* in this, that it runs not Monthly, but continually, and lastingly, and sometimes in so great a Quantity, that it is followed by a Dropsy and incurable Consumption.

The whole Cure therefore of this Distemper ought so to be managed; that Part of the serous filth be removed from the Womb, and brought away, the faults of the Chylification, which first occasioned the Distemper be Corrected, the Mixture of the Blood amended, and its due Consistence restored; Lastly that the Glandules and other Vessels of the *Uterus* be stoppt, consolidated, and brought to their former firmness.

As to the Evacuation of the superfluous *Serum*, and the Cleansing of the Stomach; Vomits are chiefly recommended to be taken in the beginning of the Distemper, before the Strength is much decayed; and among these they mightily extoll the *Hypocacua* Root; of which above in the Chapter of the Bloody Flux. Purges by Stool are forbid by Practitioners; which take only, as said of Strong ones, that are apt to agitate, and ferment the *Serum*, but not of gentle Purgatives; as *Rhubarb*, *Cassia*, *Tamarinds*, *Manna*, and the like. For the Derivation, and Revulsion of the said *Serum* they make Issues in the Arms: But the Consistence of the Blood is restored, first by Thickning, and Salt entangling Remedies, Jelly of Harts-horn, and Broth of Vipers, Cray fish, Isinglass, Glue dissolv'd in Broth: Secondly by fix'd Precipitating *Alkalis* Ccral, pearl, Seal Earth, Pike Jaws, burnt Harts-horn, and Allum



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\* Allum, Cuttle Bone, Osteócalla, martial Diaphoretick and the  
 \* Stomachical Spicifick: Thirdly by the Vulnerary Herbs a-  
 \* bout Geneva, of which is spoken in the Chapter of Spit-  
 \* ting of Blood, and elsewhere; to which they add Daifies,  
 \* Plantain, Agrimony, water Lillys, St. John's Wort, Tor-  
 \* mentill, Bistort, the Tops of Curant Bushes, and other Ad-  
 \* stringents: Which must be succeeded by Balsamicks; Rose-  
 \* mary, Balm, Archangel and Mint; which are call'd Specificks:  
 \* Lastly to consolidate the Vessels, they use *White*, or true  
 \* Balsam, Balsam Copive given in Broths or Conserves:  
 \* likewise Turpentine, either Vulgar, or of *Cyprus*; of which  
 \* half an Ounce or more is given at a time in a Bolus, and  
 \* is added to the abovemention'd Powders: These things are  
 \* intermix'd with the use of Milk, either of Asses or Cows,  
 \* diluted with the Decoction of China, Lentiscinum, Mis-  
 \* leto of the Oak; or newly Milk'd, or Thickned, and turn-  
 \* ed, by throwing red Hot pieces of Steel or Flint into it.  
 \* Nor are the Sulphureo-nitrous Baths to be omitted, of  
 \* which if you dread the Heat, let the Water be brought  
 \* home to the Patient, and put into a bathing Tub. The  
 \* same Waters, especially such as are Chalybeate, are proper  
 \* inwardly; let their Victuals be made of Barley, Oats,  
 \* the Extremitys of Animals, and their drink be Rough Wine  
 \* with Water; or a Decoction of Water Lillys, &c.

## C H A P. VIII.

### *Of a Scirrhus of the Uterus.*

**A** *Scirrhus* may be bred in the Womb as well as in  
 the Liver, Milt, and other Parts; and is produced  
 from the same Causes, and in the same manner: Yet  
 there is one peculiar Cause, which is used to bring a  
*Scirrhus* of the Womb; when at the time of the Menstru-  
 al Flux, or Child-bed Purgations, Women, or Virgins  
 are exposed to the cold Air; for then by Cold taken, the  
 Blood is retained in the Womb, and commonly raises a  
*Scirrhus* Tumour.

The Signs of this Distemper are a Hardness and Re-  
 sistance in the Region of the *Uterus*, a sense of Heavy-  
 ness in the same Part; especially, when the Patient  
 stands: they have no Fever, and there is none, or very  
 little Pain: if a *Scirrhus* succeeds an Inflammation, the  
 Fever

Fever, and Pain cease, but the Hardness remain; as is said above: If it be all over the Body of the *Uterus*, you shall know it by feeling it outwardly in the *Regio Pubis*; and if it be in the Neck of the Womb, the Midwife may feel it with her Finger; it is distinguish'd from a *Mola*, by the aforesaid Signs; besides in a *Mola* the Breasts are swell'd with Milk, and not in a *Scirrhus*. As to the *Prognosis*: a *Scirrhus* of the Womb is very Difficult to be Cured, because of the Thickness, and Obstinacy of the Humours that will not yield to Remedies: a *Scirrhus* of the Womb commonly draws a Dropsy; because the free Circulation of the Blood is hindered; wherefore what is thin and waterish Sweats easily thro' the Pores of the Vessels, or the Spaces between the Parts; it commonly turns also to a *Cancer*, because the Humours by their stay in this Part grow very sharp and corrosive.

The cure of a *Scirrhus* of the Womb is quite the same with that of others, of which we have treated before; wherefore you must fetch the Remedies from thence; as Aperitives, fix'd and Volatile Salts, &c. exhibited inwardly; as also Ghalybeat, Mercurial and Alkaline Medicines; after the use of the *Universalia*; which must be succeeded by Emollient Cataplasms, Fermentations of the Roots of Wild Cowcumber and Bryony, Emollient Glysters, Plaisters of Bdellium, Gum Ammoniack, Emollient Injections with Pellitory, Saffron, Roots of Wild Cowcumber; or Bryony, which because they are endued with thin Particles, stir and attenuate the thick Humours; Baths or a Bathing-Stool of luke-warm Water, or hot Mineral Waters are of great Effect in this Distemper: prescribe also the Fumigations aforesaid, Wine that hot Bricks have been quench'd in, hot Brandy, or a Decoction of *Regulus Antimonii*; yet take heed that by the excessive use of Remedies you cause not a *Cancer*, to which a *Scirrhus* of the Womb is very near related.

## CHAP. IX.

### *Of a Cancer in the Womb.*

**T**O understand this Distemper more thoroughly I shall say something of a *Cancer* in general. This then which in Greek is call'd *καρκίνος*, is a hard unequal Swelling.

ling, of a livid or blackish Colour, the Veins about it being turgid and full, attended with a pricking and cutting Pain, commonly bred in Parts that are full of Glandules, as in the Face, Lips, Mouth, Eyes, Privities of Women, Uterus, Fundament, and very often in the Breasts of Women; Lastly, all the Skin over, as being fill'd with small Glandules; it has various Names, according as it invades various Parts: in the Leg and Foot it is call'd *Lupus* or Wolf, because it is in this Part very Devouring, in the Face it is call'd *Noli me Tangere*, or touch me not, because Remedies make it worse; and in other Parts it is called a *Cancer*. The Authors describe two Species of it, the one is call'd Ulcerated; when because of the Acrimony and the Corrosion of the Humours, that cause and foment it, the hard Swelling is opened, and then it looks like corrupt Flesh, Foul and of a horrid Aspect; the Lips of it being hard, with sometimes an Eruption of Blood from corroded Vessels, the other is call'd not Ulcerated, or occult, in which there is also a hard Swelling, that is unequal and Painful; but because the Matter is not so sharp, the Swelling is not opened yet, but as in time it grows sharper, it turns to an Ulcerated *Cancer*: a *Cancer* in the beginning is small and very obscure; it increases by degrees, at last grows large and easily spreads, and creeps to Neighbouring Parts, by reason of the violent Acrimony of the Humour, which is so apt to eat and corrode them.

The Ancients said, the Cause of it was the Black Gall: but we say it is a very Acid *Lympha*, that is corrosive and Savouring of the Nature of *Aqua Fortis*, which Acidity and Corrosive Virtue it gets by staying too long in the Strainers, by reason of the Obstruction of the Glandules, to which also contributes the Blood, being made acid by the six unnatural things. Wherefore it is no wonder, that a *Scirrhus*, which commonly proceeds from a thick *Lympha* staying in the Glandules, turns easily to a *Cancer*. The Pain attending a *Cancer* proceeds from the Corrosion of the Parts that are sensible, the Hardness from the thickness of the *Lympha*, that fills and Obstructs the Glandules, the inequality of the Tumour, from the unequal heap of the Glandules; for there are not one but many Glandules affected: that the Part looks black and livid, and the Veins about it is very much apparent, is only owing to the Humour

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mour, which is very violently acid, fixes and coagulates the Blood that circulates in and about it.

As to the *Prognosis*: Of all Swellings this is the most dangerous, and difficult to be cured; for either by the Violence of the Symptoms and its Malignity, or because it spreads so wide and runs so far that it cannot be stoppt; it kills the Patient; that which is Ulcerated is worse, than the other, yet both are counted incurable, so that it can be only cured by Cutting, if that can be done, that is by Extirpation; or Causticks, that is by burning, which likewise is full of Danger. For the Blood, whilst it circulates through the Part that is Afflicted by the *Cancer*, is by degrees impregnated with that bad Humour, and at last spoil'd in its mixture, not having a Part on which it can throw the bad Humours with which it is fill'd. From what has been said the Nature, Cause, nay even the *Prognosis* of a *Cancer* of the *Uterus*, may be easily known.

As to the *Diagnosis*; It is known by its Hardness and Resistance, a cutting Pain in the Body, or Neck of the Womb; by that a *Scirrhus* is commonly gone before; yet it is more evident when it can be seen, that is, when it is in the *Vagina*, or in the Neck of the Womb, viz. by the help of a *Speculum Matricis*, for then the Tumour appears in the same manner, as we have described it. If it be Ulcerated it emits Matter, and Corrupt Stinking Humours, and sometimes Blood, by reason of the Corrosion of the Blood Vessels, which Blood is sometimes, when many Vessels or a large one are corroded, voided in such a quantity, that the Patient is in Danger of her Life; to these Signs come Anxieties, a small Fever, a Heat in the Privy Parts, and the like.

The Cure of a *Cancer* is attempted several ways: *First* if it seems to be necessary, Phlebotomy is prescribed, Purges are now and then repeated; and first Purging and afterwards Anodine Glysters are administred; Whey, that Dodder, Black Hellebore, Oake Fern, or Fumitory have been infused in for fifteen Days; a Bath of fresh Water, the use of Milk and lenitive Victuals, all things made with Barley, Almonds, and Rice; the Decoction of the Entrails, the Head, and Extremities of a Sheep, or other Animals, avoiding all things that are Sharp and Salt: Mineral Waters are of very great use, Narcoticks, Deco-

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tions of Guajacum and Antimony, Tempering and Opening Apozems, fix'd and Volatile Salts, the Salt and Eyes of Crabs, Fat Broths made of very good Meat, Steel, Mercury, and especially Mercurius Dulcis often taken, or Mercurial Pills. Among the outward Applications are recommended the Juices of House-leek and Night-shade; Lytharge, Cerufs, Tutty, with Oyl of Lillies, or St. John's Wort, in Form of an Oyntment, with a thin piece of Lead applied to the Part, calcined Powder of Crabs, the Oyntment of green Frogs; *Observat. 97, Cent. 1.* The Powder of Toads calcined in an Oven, after the Bread has been drawn, or a whole Toad applied to the Part, Oyl of Eggs with Sugar of Lead, Mercurial Oyntment, Diapompholyges. Lastly, Causticks of Mercury corrosive, or Arsenick, &c. with many other Remedies to be found in the Authors; tho' all are of very little Effect, and you must come to cutting at last, and extirpate the *Cancer*; but because Causticks nor Cutting, nor hardly any Remedies are safe; because they exasperate the Tumour, they commonly make use of Palliatives, that is, such Remedies, as only hinder the Increase of the Distemper, as Lenitives inwardly taken, and likewise outwardly applied to the Swelling: If the *Cancer* be not Ulcerated, its Exulceration is to be hinder'd by all possible means; when it is quite Ulcerated its spreading is to be prevented by applying Beef or Mutton to the Swelling, for then the Humour Feeds on Beef, and spares the Patient's Flesh; this Application of Beef is to be renewed every Day, by this Cure of a *Cancer* we may Judge, what Remedies are proper for a *Cancer* of the *Uterus*, they may be applied with Tents, or a Pen, or *Pessaries*, yet they may be administred more easily in Form of an Injection, especially if the Cavity of the *Uterus* be Affected; white Troches of *Rhass*, Sugar of Lead, Camphir, with some Laudanum or the Syrup of white Poppies, if the Pain be raging: a Decoction of green Frogs, as also of Toads may be injected, the Decoction likewise and Broth, or Juice of Cray-Fish, or Milk to ease the Pain, emollient Decoctions, and Narcoticks often taken relieve the Patient very much; if by reason of the Corrosion of the Vessels there is much Blood voided, make use of Adstringent Injections of Plantain Juice, and that of Milfoil, Nettles, or their Decoctions with Red Roses, and Balauftians; and Bleed in the Arm.

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‘ Tho’ it is almost impossible to cure a *Cancer*; yet the Authors recommend abundance of Medicines, of which some at least mitigate the Pain, and Sweeten for some time the excessive Acrimony of the Humours or *Lympha*; among which, after the *Universalis*, Bleeding and Purging; Opium or Laudanum, the best of Anodines is always of use; various Herbs are likewise prescribed inwardly, as well as outwardly, as Endive and Succory, Night-shade, Herb Robert, Scabious, Fumitory, Plantain, Chervil, Wood-bind, Water-creffes, Sage, Hemlock, Prick-Thistle, Carduus Benedictus; a Cataplasim of Hemlock is much recommended against the Pain. *Forellus* relates, that an old Woman cured a *Cancer* with chew’d Sage applied to it; the same recommends Human Excrements applied to the Tumour; Rotten Apples are also proper; they likewise prescribe Cray-Fish pounded in a Leaden Morter, the Juice being applied to the Part Affected.

‘ Many other Medicines are made of Lead, as Oyntments with burnt Lead, Cerufs, Lytharge, Vermilion; as also an Amalgama of Mercury with Lead, and slices of Lead wash’d over with Quick-Silver; they recommend likewise prepared Wood-Lice with Crabs Eyes, a Dram being given for a Dose, in some proper Liquor, as the Juice or Decoction of Chervil, or Milk Whey; Asses Milk is likewise of great Virtue here.

‘ For *Cancers* that are Ulcerated, they recommend the Powder or Ashes of Toads, and Green Lizards, which is strow’d upon the Ulcer, first wetted with Plantain Water: they make likewise Powders and other External Remedies of Arsenick, that used with caution are of great Efficacy. The Water of unslack’d Lime, and all Medicines made of Lead, &c. are of no less use here.

‘ A *Cancer of the Womb* is cured no otherwise, than that of other Parts; all the Industry consists in injecting the Medicines into the Cavity of the Womb.

## CHAP. X.

*Of a Gangrene, and Mortification.*

A *Gangrene* generally taken, which commonly is called *St. Anthony’s Fire*, is a beginning Corruption of the Parts tending to a *rexpositio* or Mortification; but a *Sphacelus*, which by another name is called *Syderatio*, is an absolute, and perfect Corruption, and Mortification of the Part; so that these Distempers only differ in the de-

gree. In a *Sphacelus* the Part is deprived of all Sense, Motion, Heat, and Life; but in a *Gangrene*, which is the way to a *Sphacelus*, the Part is not yet perfectly corrupted; and the Sense, Motion, Heat and Life are not totally gone, tho' they are much diminished: In the Flesh it is called a *Gangrene*; but in the Bone, a *Caries* or Rotteness. The joyn'd and nearest Cause of both, viz. a *Gangrene* and *Sphacelus* is the Destruction of the natural Heat in the Part, or a Cessation of the Circular, as well as Fermentative Motion of the Humours and Spirits, in which Life consists; for a *Gangrene* and more especially a *Sphacelus* differs not from Death it self, but that the latter belongs to the whole Body; and that only to some Part or other; wherefore a *Sphacelus* may justly be called a particular Death; as Death may be called a *Gangrene* of the whole Body; because the Motion of the Humours and Spirits throughout the Body, in which Life consists, is ceased. There are many Causes, which according as they are more or less intense, produce either a *Gangrene*, or a *Sphacelus*; such are an Inflammation, a *Scirrhus*, an Ulcer, excessive Cold, hard Ligatures, the Transpiration's being hinder'd, Poyson; all which by stopping the Parts, or hindering the Influx of the Blood, act by fixing and coagulating the Blood.

A *Gangrene* is known by the Feeling of the Part's being diminished, a Coldness, Softness, Livid Colour, and Stink of the same; which Symptoms are all worse in a *Sphacelus*: It also spreads, and is easily Communicated; as we see in Rotten Fruit; where one Piece is able to Corrupt a whole Heap; which some deduce from the Motion of the Humours, which, being Abolished in one, is easily Transmitted to a Neighbouring Part; for when the Motion of the Blood begins to be intercepted in one Part, it is quickly intercepted in another, that is near it: Others say, it proceeds, from little Worms, bred in vast numbers in the Gangren'd Part, which daily increase so much, that one is thought to Breed more than Two Hundred: As to the *Prognosis*; how Dangerous a *Gangrene*, and *Sphacelus* is must be Manifest, if we consider; that it is a Particular Death, from which a Part, being once Affected, can never be freed again; and that it is so easily Transferr'd to the Neighbouring Parts. It is to be reckon'd

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reckon'd more, or less Dangerous, according to the Nobility, and Figure of the Parts, which it invades; whence it is Mortal in the Internal Parts, which it is not always in the External: For the Member being Extirpated, and the Part being Cut off, Life may be Preserved; or if the Part be not totally Mortified, it may often be reduced to its former State by Hot outward Applications. The Cure of a *Gangrene* after the *Universalia* is commonly Performed by Various External Remedies: As Scarification, that the Transpiration may be Promoted, and the Remedies penetrate the deeper; Washing the Part with Salt Water, or a Decoction of Aromatick, and Hot Herbs; or a Decoction of Scordium, which is thought to be Peculiar in this Distemper; Prandy, Camphorated Spirit of Wine. *Ægyptiacum* dissolved in Brandy, mix'd with Digestives, Myrrh and Aloes: Of Cataplasms of Flower I approve not; but if the aforesaid things have no Effect you must Proceed to Actual, and Potential Causticks; and at last to Amputation; cutting with a Penknife or Lancet whatever appears black or livid in the Gangren'd Part, till the Patient feels the Pain of the Cutting; or Extirpating the Member, if a Foot, Leg, Hand, or Arm be Affected; for which, how it is done, consult the Surgeons: From these things, the Nature, and Cause of a *Gangrene*, and *Sphacelus* of the Womb are easily gathered; for in this Part a *Gangrene* is sometimes Produced, and is the Consequence of an Inflammation, *Scirrhus*, or a Cold taken in the falling down of the *Uterus*, Labour or Miscarriage; the more when this Part is very soft, and loose, and Consequently very much Subject to the Stagnation of the Humours: For it is Discovered by a Sense of Coldness in the Abdomen; the injections, whether irritating, Hot, or Cold are not felt; a fetid, and Cadaverous Stink comes from them; or it may be seen by the help of *Speculum Matricis*; if it be in the *Vagina*, and the neck of the Womb: The Peculiar Remedies for this Distemper are not Different from those already Mention'd, which may be exhibited in form of Injections, or Tents, if it be in the *Vagina*; it may likewise be Scarified and Cut; if it be Possible, or you may Extirpate the Womb it self, if it be fallen; as Observations witness, that often has been done.



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‘ The Natural Heat, the Extinction of which a *Gangrene* follows, according to *Etmuller* consists in a Volatile and Spirituous Acid, that is like the Agent in the Structure, and Coagulation, or Formation of a Part: This Vital Acid, Says that Learned Author is Preserved, and Restored by the Salts and Occult acids that from the Blood, and Vital Spirit continually Flow into the Parts: Wherefore all, that Destroys this acid, and is able to hinder its Generation, Produces a *Gangrene*, and afterwards a Mortification; hence it follows, that in a *Gangrene*, and Mortification the Alkaly is chiefly in fault, in so much as it is made by the Destruction of the Acid, or is able any how to Destroy the Acid, that is Bred in it; hence comes the Stink and Putrefaction, which follow the *Gangrene*, and Mortification, which is a sign that the Alkaly works upon the Acid, and dissolves the Sulphur of the Parr. So far *Etmuller*.

‘ The Cure of a *Gangrene* requires Internal, and External Remedies; the Internal are Alexipharmack Sudorificks, as Treacle Water, the Mixture *de Tribus* in a Draught of Carduus Benedictus Water; to which they add Mithridate, Dia-scordium, the Powder of the Root of Contrayerva, Con-fection of Hyacirith, &c.

‘ The External Remedies First Consist in Scarifications of the Part Affected; then washing of the same with Spirit of Wine Simple, and especially Camphorated, Salt Water either by it self, or that which Wormwood has been Boyl’d in: They Recommend besides Sour Cabbages, the Water of unslack’d Lime with Mercurius Dulcis, or rather Sublimatus Corrosivus with Spirit of Wine, but this is to be used with Caution; and a Decoction of the Recrements of Antimony in Vinegar stops a *Gangrene*, if you believe the Observations of *Riverius*, the same Effect has a Decoction of Sal armoniack in the Urine of the Patient.

‘ They Prepare also Cataplasms of Scordium, Birth-wort, Wormwood, Scabious, Celandine, Hyssop, Sage, Rosemary, Agrimony, Rue, Dittany of Crete, the Flowers of Chamomil, Elder, Mugwort, the Flowers of Beans, Lupins, Barley-Tares, boyl’d in lye, Sea Water, Oxy-mel, Wine, &c. Some add Horse-dung, Alum, Vitriol; to the common Digestives of Turpentine, Honey, and Yolk of Eggs add the Powder of Aloes, Myrrhe, Saffron, Venice Treacle, Mercurius Precipitatus, Spirit of Wine, Apostles Oyntment, &c. *Egyptiacum*, which the Surgeons are so ready with, is with great Reason Disapproved off by some, because that Sort of Oyntment is too Adstringent; it is very Proper to add to these Cataplasms Ink, and Tincture of Castor with Asa Ferida: Oily and Aromatick

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‘ Aromatick Volatile Salts are likewise of great use, as well inwardly as outwardly Exhibited.

‘ If all these things do no good you must come to Surgery, by which the Mortifi’d Part is cut off: But some unwilling to admit of this Remedy, Separate the Dead from the sound Part, by the help of Butter of Antimony, drawing with it a Circle on the confines of the Mortification, after the Separation is made by the Butter of Antimony they Recommend a Liniment of Mercurius Precipitatus, Boyl’d with Oyl of Nuts; which Liniment is also Proper before the Separation.

‘ The same Remedies are used in a *Gangrene* of the *Uterus*, which is not observed to be Afflicted with this Evil, but when it is fallen; as to the *Vagina*, Here it is more easy both to Discover the Distemper, and to apply the Medicines.

## C H A P. XI.

### *Of an Inflation and Dropsy of the Uterus.*

**T**H O’ the Authors have been used to Treat of an *Inflation*, and a *Dropsy* of the *Uterus* Joyntly, and to confound these two Distempers, thinking, that they belong to the *Dropsy* of the *Uterus*, whether they be Produced from Winds, or a Collection of Serum; as the *Tympanities* and the *Ascites* belong to the *Dropsy* of the *Abdomen*; yet there are some Sudden *Inflations* of the *Matrix*, made of Winds and Vapours, arising from Humours, fermenting in this Part; as it happens in Hysterick Fits; which because they are of no Continuance deserve not the Name of a *Dropsy* of the *Uterus*. Of this *Inflation* of the *Uterus* then we shall not speak here; but only of that, which Continues longer, and Proceeds either from Winds long retained, or Water gather’d in the Cavity of the Womb, no otherwise, than an *Ascites*, and *Tympanites* are both *Dropsy’s* of the *Abdomen*: Wherefore the Nature, Cause, and Cure of the Distemper, of which we Treat, may easily be learned, from what we have said heretofore of those Distempers; as also of the *Dropsy* of the Breast, because they only differ, as to the Affected Part, and are Produced the same way: for the Waters that, Constituting the *Dropsy* of the *Uterus* are gathered in the same, are Contained in its Cavity, either

by a Swelling, that Shuts the Passage, or some other Cause, that Stops its Ovifice or makes it grow together, and unite; as the Observations of *Rhasis*, *Dodonaus*, and *Vesalius* testify; or they are included, within little Bladders, raised from the Internal, or External Membrane of the *Uterus*, and make *Hydatides*, or Water Bladders; of which *Dropsy*, *Aetius*, *Valeriola*, *Christopher a Vega*, *Mercator*, *Platerus*, *Fabritius Hildanus*, and *Ilatus* have given us Examples: What belongs to the *Dropsy*, which is like the *Tympanites*; the Winds in the *Uterus* are commonly Joyn'd with the Humours contained in the Cavity, from which the Vapours are Raised, Augmenting the *Inflation*, and Distension of the *Uterus*; as I said of the *Tympanites*. Sometimes the Winds only Fill the Cavity of the *Uterus*, tho' they are derived from the Humours that Sweat through the Tunicks, and either by Fermentation or Heat are resolved unto Vapours; which cannot be voided, before the Ovifice of the *Uterus*, being closely shut, be opened either of it Self, or by some other Cause: of this we have Examples in *Valesius de Tarenta*, *Matthew de Gradi*, *Dodonaus* &c. Who relate, that they have seen Women, that Believing themselves to be with Child, at the Times when they Expected their Labour, voided a great Quantity of Wind, and so got Rid of their great Bellies.

Besides the Causes which this Distemper has common with other Species of the *Dropsy*: viz. A Watery Constitution, by Reason of a Defect in the Sanguification, or a fault of the First Concoction, a Bad use of the Six unnatural things, immoderate Evacuations of Blood and other things, which Impoverish the Blood; besides also the Obstructions in the *Uterus*, by Reason of which the Blood has no free Passage in this Part, and by Distending the Vessels, Premits its most Serous, and thin Part, to Sweat through, and Run out of the Vessels, and so Occasions at last a great Collection of Serum in this Part; there are other Procatarrick Causes Peculiar to the *Uterus*: Such are Cold got in Labour, a Difficult Miscarriage, Excessive Flowing of the *Menstrua*, or a lasting Suppression of the Same, a Scirrhus, Ulcer, Tumours in the Womb: All which, how they Act, and Promote the gathering of the Serum, is easily Explained: but the Winds, which are commonly Joyn'd with the Collection of the Waters; are owing to the same Causes; or, if alone, Proceed from the

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the Fermentation of the Humours, or the Heat of the *Uterus* and other *Viscera*.

This Distemper is known, and Distinguish'd from a *Dropsy* of the *Abdomen*, by that the Tumour of the Belly is only in the Hypogastrick Region; that it is not followed so soon by a Paleness, and Extenuation of the whole Body, nor a Drought, and Dryness of the Tongue; and that here the Symptoms are less Grievous, because the Cause is less Violent, the Weakness of the *Viscera* is less, and the *Uterus* is only Affected; lastly by Winds or Waters, which are sometimes Voided through the Privy Parts: If the Waters only have Created this Distemper, there will be a Sense of Fluctuation in the Hypogastrium; that Region will be Soft, and Flaggy, the Swelling increase dayly, and a Tumour of the Legs and Feet succeed; but if the *Uterus* be fill'd with Wind, the Heaviness shall not be so great; there shall be more Distension, the Tumour Struck will Sound, there will be a greater Difficulty of Breathing, and the Patients be worse after Meals; because of the greater Inflation of the *Uterus* by the Winds, the Dilatation of the Stomach, and the Descent of the Diaphragma being hindred in the Respiration; but whether the Distemper Principally proceed from the fault of the *Uterus* only, or likewise from a fault of other Parts, shall be known from the Procatastick Causes; for if a hard Labour, Miscarriage, Scirrhus, Tumours in the Womb, Suppression of the Menstrua have Occasion'd this Distemper, the *Uterus* is first in fault, and is the primary Cause of the *Dropsy*: But if no such Causes, but rather Obstructions of the *Viscera*, the Green-Sickness, a *Cachexy*, lasting Fevers, Hemorrhagies, Crudities of the Stomach are gone before; then it Proceeds not Principally from the Womb; but from the Blood, and other Parts of the Body; whether the Waters be contained in the Cavity of the *Uterus*, or between the Membranes, is manifest from the greater Fluctuation; for, because in the Cavity of the *Uterus* is Room, in which they may be moved, the Fluctuation is greater, than when they are kept between the Membranes, where they cannot move themselves; from Tumours, an Inflammation, and *Erysipelas* of the Womb, by the Pain, Fever, and Heat, which are Present in those Distempers; from a Scirrhus, and Cancer, by the hardness, and Pain, and other signs of a Scirrhus, and Cancer; related in their proper Places;

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from being with Child by the habit of Body, which is better, than in a *Dropſy*; by the Motion of the Child in due Time, the Swelling of the Breasts with Milk, which in a *Dropſy* are Extenuated, by Reason of the ill Mixture of the Blood; as also by the Hardness; and Swelling of the Belly, which are greater, where there is a Child, than in the *Dropſy*; from a *Mola* or a Rude lump of Flesh, which by the perverse Structure, and Oeconomy, or some other fault of the Egg fallen out of the Ovarium is generated in Stead of a Child, it is more difficult to Distinguish a *Dropſy* of the Uterus, than from the other Distempers already Mention'd: Yet there are some Signs, that help to make the *Diagnosis*; First, if a *Mola* be small, the *Hypogastrium* is not Swell'd so much; and if it be large, the Swelling is not so soft, and there is a greater Sense of Heaviness in the Uterus than in a *Dropſy*: Secondly, when the Patient turns from one Side to the other; She feels a Fluctuation in the *Dropſy*, and not in a *Mola*; where she feels only a Dead weight, tumbling from one side to the other; Thirdly, in a *Mola* the Breasts Swell in the beginning, and have sometimes Milk in them; nay they Commonly have their Courses, which happens not in a *Dropſy*. As to the *Prognosis*: This Distemper like all other Species of *Dropſies* is Dangerous, because it is of a long Continuance, not easily Cured, and very soon draws in an *Ascites* and *Anasarca*; if the *Viscera* be weaken'd, and the Blood impoverish'd, you must Expect no Cure; but if the Distemper be but beginning, and Proceeds from some External cause, and the Blood is not impoverish'd, yet it may Receive a Cure; especially if the Water be Contained in the Cavity of the Uterus, and not in Bladders.

The Cure of this Distemper, which is the same with that of the other Species of the *Dropſy* treated off before, I here purposely Omit; because it may be found in the Respective Chapters of those Distempers: Yet the peculiar Remedies in this Distemper, are half a Dram of Borax Mineral, with Ten Grains of Saffron, and a Sufficient quantity of Juice of Savine made into a Bolus, and Exhibited often; Exercise is likewise Recommended in this Distemper; the Powder of Cornachini given now and then; but the Appropriated Plants are Savin, Smalage,

Fever.

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Fever-few, Madder ; Fumigations may likewise be used of Hot Wine, Brandy, and Decoction of the Dregs of Regulus Antimonii, Pessaries, or large Tents with boyl'd Honey, Sal Gemme, Salt Peter, or Colloquintida, or the Powder of Hiera Picra may be put in, to open the *Uterus*, if it be shut, and to promote the Flux of the serous Humours : if there be Winds, to discuss them the Authors recommend Fumigations of Nutmeg, received through a funnel ; as also the Decoction of Flowers of Chamomil taken inwardly, and by way of Fumigation both. Glisters, Causticks, as well as Plaisters, and Oyntiments are not approved of in any *Dropsy*.

## C H A P. XII.

### • *Of the falling down of the Uterus.*

BESIDES the aforesaid Distempers of the *Uterus*, which consist in its bulk being Augmented, a *Solutio Continui*, and Obstruction of the Passages, that is the *Vagina* and Cavity, &c. there is likewise another Ailment of this Part, which chiefly consists in the Alteration of the Site of the Part ; and is called the falling down of the Womb, which in its Natural state ought to remain in the lower or Hypogastrick Part of the Belly ; and be fastned at the sides and bottom by proper Ligaments ; but by the Rupture or Relaxation of these Ligaments is inverted and falls down to Privy Parts ; of this Falling down there are several Species ; which only differ in the degree ; sometimes the inward neck only, or upper Orifice of the Womb, relaxing in it self, rowls down into the *Vagina*, sometimes the whole Body of the *Uterus* inverted descends into the same *Vagina*, by a relaxation of the upper Orifice, through which the Body of the *Uterus* must pass. Sometimes the Bottom of it is so inverted, and descends so Low, that it Hangs out of the Privy Parts, sometimes less than the Scrotum of a man, and sometimes more, and quite down to the Thighs.

The Cause of this Distemper is no other, than the Rupture or Relaxation of the Ligaments, that keep the *Uterus* in its Site ; and chiefly of the Broad Ligaments ; or that Membrane, which resembles the wings of Bats, from which it has its name ; tying and keeping up the *Uterus* by  
the

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the Sides and *Cornua* here and there, that is at the right and left; by which Rupture or Relaxation, the *Uterus*, being no longer kept in its site and Disposition, falls by its own weight toward the Privy Parts, more or less, according to the greater, or lesser Relaxation, and Rupture of the said Ligaments; to which Falling down Contributes not a little the Relaxation, and Flaccidity of the upper Orifice of the Womb; for the whole Body of the *Uterus* could not go through it, if it was not Relaxed; because its Opening is so small. The Ligaments may be broke by Various Violent Causes: *viz.* A Blow, a Fall, Dancing, Sneezing, Coughing; because in these Cases the Body of the Womb is shaken much; by carrying too great a weight, hard Squeezing of the Belly, Violent Straining to Exclude a Live or Dead Child, a *Molz*, after burden, Excrements, &c. because the Air, being longer Retain'd by these Strainings, Squeezes the Midriff downward, and Consequently the Stomach, Guts, and *Uterus*; whence the Ligaments Suffering a Divulsion, and Elongation are at last Broke or Relaxed. The same may be Occasion'd from a hard Labour, a Violent pulling away of the Child, or after-Burden by an Unskillful Midwife; for the same Reasons, the said Ligaments are likewise Relaxed by Serous Humours, lying down in that Part from the Orifices of its proper Arteries; as also in the *Uterus* it self, and its Neck; which serous Humours cannot be gathered in these Parts, but must relax them so that they can be kept no longer in their Position; wherefore it is no wonder, that Women, that have been long Afflicted with the Whites, can hardly scape this Distemper. to this internal Cause, come other external ones, that help and stir it up to Action: As Bathing, foul Weather, hard Drinking, moist Food, and other Causes, that are able to create serous Humours, and to relaxe the Parts of the Body.

This Distemper appears to the Senses, for the *Uterus* is found in the *Vagina*, or Privy Parts, and sometimes beyond them, of the bigness of an Egg; and sometimes of the bigness of a Man's *Scrotum*, with a Sense of Heaviness about the Privities, which increases when they stand; and is less when they sit down; they cannot go to Stool, nor make Water easily, and if the *Uterus* hangs out very much the Pain is greater.

The

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The Signs of the Causes are fetch'd from what is gone before; for if the Causes be violent, you must suspect a Rupture, if moistning a Relaxation.

As to the *Prægnosis*: This Distemper is very troublesome, for it hinders their going, and the flowing of the *Menstrua*, nay, it is not without Danger; for it is to be fear'd, that a *Gangrene* may succeed, by reason of the coldness of the Air, easily stopping in this Part the Circular, and Fermentative Motion of the Blood, or other grievous Symptoms, which sometimes attend it. That which proceeds from a Rupture of the Ligaments, is Incurable; but that which proceeds from a Relaxation, admits more easily of a Cure, when it is newly come, and in young People it is more easily cured; than when it is inveterate, and Invades old Women.

To Cure this Distemper, the *Uterus* must presently be put in its place, and there be retained; which is better done, if the Bladder and Guts be exonerated, first, because their being full, hinders the Reduction; it is either done naturally without any Remedy, or by the help of Emollient Glysters: For a greater precaution you may likewise order Bleeding in the Arm before, and especially after the Reduction of the Womb: afterwards the Woman must be laid on her Back, with her Legs asunder, and her Knees drawn up; then by the hand of the Midwife, if it be possible, the Womb must be squeez'd inwardly, or else it is to be done with a thick Stick, wrapt up in Linnen: if the *Uterus* cannot be reduced, by reason of the Swelling or Hardness, make use of Emollient Fomentations, (and not Cataplasms, because they Suffocate the natural Heat) of Wine, adding a little Brandy: If an Inflammation hinders it from being restored, that must be Cured by Phlebotomy, and cooling inward Remedies; first by Oxycrate, applied to it warm; afterwards by dissolving Decoctions: The shewing of sharp Instruments, as if the Surgeon was to stick them into the Womb, tho' it frightens the Patient, is not able to reduce the Womb; however *Rodericus a Castro* affirms it; nor the running of Mice and Lizards over their Legs and Thighs, as *Avenzoar* and *Zacutus Lusitanus* would have it: especially when it is hard, and too much Swell'd; those things may do sometimes, when the Womb is fallen very little, otherwise they are of no effect: drying or adstringent Powders, strewed upon the *Uterus*,  
before



before its Reduction are of no use, nay, they rather do harm; judge the same of Oynments: it is better to wash wash the Part with Wine only. When the *Uterus* is put up, let the Patient lie backward in Bed, with her Legs and Thighs elevated, and the Body leaning downward for some time, holding one Leg over the other, putting also a large Tent or Pessary, not of Cotton or Woollen, (as *Riverius* says) because they heat and might cause an Inflammation; but of Lint dipt in Wine, or half Rose-water and half Red Wine, that is adstringent, or in luke-warm Oxycrat, or an adstringent Decoction. To retain the Womb in its place, make not use of Cupping (which does little good) nor adstringent Baths, tho' *Riverius* prescribes 'em, because they Augment the Distemper, by reason of the position of the Patient in the Bath, or the Agitation in putting her into it: but a Pessary or long Tent, kept in by a Linnen Cloath, tied underneath it; or an Instrument call'd a Uterine Circle made of Cork, covered with Wax or of other Wood, that is thrust into the *Vagina* up to the Neck of the *Uterus*, and remains there; nothing can be put in better; because it leaves room for the Menstrual Purgation, the Woman may admit Men, Conceive, nay bring forth Children; only pulling back the Circle at the time of their Labour, and after that putting it in again; when this is done, if the Distemper proceeds from a Rupture, it requires no other Cure than what belongs to the attending Symptoms; but if a Relaxation brought it, the Moisture that made it, is to be consumed by *Baganio's* Sudorifick Decoctions; not forgetting the universal Remedies, which may be administred and repeated, as the Physician shall think fit.

If the *Uterus* be Swell'd, inflamed, hard, or Gangren'd the black Parts are to be cut off, and Scarified, in the same manner, as is said if a Gangrene: But if it possesses the whole *Uterus*, or all what is fallen Down; a Ligature being made above, it must be cut off, and extirpated; which is commonly done without killing the Patient, adhibiting afterwards Adstringent, and other Remedies, that are used in the Extripation of Parts.

## C H A P. XIII.

*Of the Shutting up of the Womb.*

WHERE the Parts set aside for Generation in Virgins and Women are well Constituted, there ought to be an open Passage from the Body and Cavity of the *Uterus*, to the Privy quite out of the Body; wherefore this Passage being stopt, there arises a Distemper called a *Shutting up of the Womb*: This *Shutting* may happen in three several Parts; for it is either external, when it is in the upper Part of the Privy; Intrinsick, when it is in the upper Orifice of the *Womb*, or Middlemost, when it is in the *Vagina*; this is occasioned in the first formation by a Natural Coalition of those Parts, or a Membrane drawn athwart them, which is most commonly the Cause; and hence the Virgins, that have this Ailment, are called *Atreta* or imperforated; or after the Nativity, by some Wound or Ulcer that precedes, and is succeeded by a Coalition of the Parts, and their Union in the Neck or *Vagina* of the *Womb* or the Lips of the privy parts; the same may be caused from a Tumour Stopping, and Oppressing the Passage; but not from a Distortion, which cannot be conceived in this part. If it be shut in the upper Orifice it is not minded, before the *Menstrua* begin to flow; or the Party makes use of Copulation, for when the time of *Menstrual* Purgation comes near, they feel Pains and Gripings in the Region of the *Uterus*, with a Sense of Heaviness, and there follows no Flux of Blood; the Suspicion of this shutting up of the *Womb* is increased, if the Virgin be well, as to every thing else, and there are no Signs of a *Cachexy*, or an Obstruction, and the Body looks red all over, or blewish from the Redundancy of Blood.

If this Shutting up happens in the *Vagina*, it is known by Copulation, or the hand of a Skilful Midwife, or by putting in a Tent; for then you find the Resistance, and if it be in the Privy, you may see it.

As to the *Prognosis*: If this Shutting up, or Coalition be in the Privy, it is easily Cured with a slight Cut; but if it be deeper, it is more difficult, if the Upper Orifice of the

the Womb be thus shut, it is incurable, for the Chirurgical Instruments cannot be carried there.

The Cure of the Shutting of the Womb depends almost wholly upon Surgery. If it be contracted from the Birth, it is to be open'd in the Privy Parts by a simple Cut, and the little Hole is to be made bigger; how and where it is to be done, is taught by the Chirurgical Authors: If it proceeds from an Ulcer in the *Vagina*, after the Coalition is separated by a Pessary, or Candle smeared with Butter, or Oyl, a Tent is to be kept in it, anointed with proper Oyls and Oyntements, that the Parts may not unite again, and the Ulcer is to be Cured, as is said in its proper place. If a Fleishy Excreescency or Tumour possesses the *Vagina*, the Tumour is to be discuss'd, and the Excreescency to be consumed by proper Remedies; if it be caused from an Inflammation, Scirrhus, Cancer, &c. of the upper Orifice of the Womb, make use of Remedies related in the Cure of those Distempers; if lastly it proceeds from a Compression of the *Uterus* or *Vagina*, viz. from a Stone in the Bladder, or Tumour of the strait Gut, the Remedies must be fetch'd from the Cure of those Distempers. I believe not; that there is a Constriction of the *Uterus* from an excessive Exsiccation, or that it can be shut by a Distortion, and therefore I propose no Remedies for them; besides that in a Distortion they would be useless.

#### N O T E.

Before we come to the Cure of the Falling of the *Uterus*, we ought to examine, whether the *Uterus* can really fall; the Ancients have always been for the affirmative, and many of the Moderns have furnished us with abundance of Examples, of what they thought the Falling of the *Uterus*; so that a Man might seem to argue against Experience, that would oppose this Opinion; but if we consider the thing more accurately, we shall find, that the Connexion of the *Uterus* with the adjacent Parts, as behind with the strait Gut, and above with the Bones by strong Ligaments, is so firm, that it is not to be conceived which way it is possible, that it should fall and come down: We shall find, I say, that such a Falling down at least cannot be occasioned by an internal Cause: As to the External Causes, it is not to be denied, but that, especially in a hard Labour, or the pulling away of the After-burden the Midwife may use so great a Violence as to protract, and tear the very Body of the Womb; but this ought rather to be  
call'd

call'd a Protraction, or Divulsion, than a Descending or Falling of the Womb: Whence it is constant from several Observations of the Surgeons and Physicians, that Women so ill treated have not liv'd long after.

But this Distemper is very rare, and what is vulgarly call'd the Falling down of the Womb is rather the falling down of the *Vagina*; and this happens, whenever the inner Membrane of the *Vagina*, which is full of Wrinkles, is relaxed and extended; which Relaxation, according as it is greater, or lesser, makes a greater or lesser Tumour, that sometimes is outwardly to be seen, as big as a Fist; and sometimes as big as one's Head, very Troublesome and Terrible to behold; for since this Part, I mean the *Vagina* of the *Uterus*, or its Membrane is full of innumerable Glandules, and Vessels, through which in this case the Blood, Lympha, and other Humours full of Salt, and Sulphur cannot Circulate, by Reasons of the Compression, and as it were Strangling, that is in the upper and other Neighbouring Parts of the *Uterus*, it is no wonder, if it Putrifies; and must be Cut out at last: and this is the reason, that we have so many Examples of the Cutting out of this Part, erroneously thought to be the *Uterus*, without Danger of Life, which could not be, if the Body of the *Uterus* it self was to be separated; for the Extirpation of that, as having far more, and larger Blood Vessels could not be done with Safety. But what need I say more, since it has been Witness'd by several Observations of Famous Surgeons; that the Bodies of Women, that had been afflicted with this Distemper, being opened, the *Uterus* has been found in its site, and only the *Vagina* fallen down. About this Matter consult *Joh van Meckeren*, an eminent Dutch Surgeon. The *Vagina* being fallen down, ought first to be reduced by the hand of the Midwife or Surgeon, as our Author tells us, then with Pessaries and commodious Site of the Body, it must be kept in its place: In the mean time neglect not the internal and external use of Adstringent Remedies; as Roses, Balaustians, Agrimony, Cypress Nuts, Mouse Ear, Sumack, Comfrey, Rupture-Wort, Blood-Wort, Galls, the Leaves of Myrtles, Olive, and Oak, Alum, Bole Armoniaek, Seal Earth, Dragon's Blood, Mastick, Horse Tail, Milfoil, Winter-Green, Sanicle, Ladies Mantle, Bugle, Plantain, &c, they recommend likewise as a Specifick, a Decoction of Sun-Flowers, to foment the Part with; for Fomentations they make also Decoctions of the abovementioned Simples in Chalybeat Water, or rough Wine; some of them, as Winter-green, Sanicle, Ladies Mantle, and other Vulnerary Herbs, are boyl'd in Wine, and the strained Liquor is given inwardly; after the adstringent Fomentations and Fumigations of the same Nature, the *Vagina* may be anointed with the Countesse's or the like Oyntment; tho' some not approving of Oyls



and Fat Medicines, as rather relaxing the Part, keep wholly to the use of adstringent Remedies ; others recommend Plaisters of Galbanum, Tacamahack, Mastick, &c. to be applied to the *Os sacrum* and Loyns : But the description of the Distemper itself, and what has been said of the Affected Part, shews that these Plaisters cannot be of great use : Among the internal Remedies may be reckon'd the natural White, or true Balsam, Balsam Copivæ, Turpentine, both vulgar, and of Cyprus, and lastly Chalybear and Nitroso-Bituminous Waters, and almost all the Preparations of Steel.

## C H A P. XIV.

*Of the Sterility of WOMEN.*

**T**HO' Sterility, by which I mean here all Impotence of Conception and Generation in general, viz. in that Age which ought to be fit for Generation, is not a dangerous Distemper, as being no harm to its individual Subject itself, and for the greatest part cannot be Cured ; because the bad Contexture of the Parts, or Humours belonging to Generation, which is the most frequent Cause of it, is inborn, and contracted by Hereditary Disposition. Yet I have a mind to treat of it here ; because tho' it be not noxious to the individual Subject, it is so to the Propagation of its kind. Tho' for the greatest part it proceeds from insuperable Causes, yet sometimes it has its rise from Causes that may be conquer'd by duely Administred Remedies ; add that it is not unworthy a Physician to know those things, which he cannot Cure ; for they help him to make a more certain *Prognosis* ; and to shun often the reproach of not being able to Cure a Distemper : This Distemper then, or rather Defect, is owing to many Causes, because abundance of things must concur to the Work of Generation in Women, and each of them are subject to Faults, that can cause Sterility.

The first Cause is the Smalness, and Narrowness of the Privy Parts and *Vagina* ; by reason of which Women ; for we speak not here of Old Women, or very young Virgins ; cannot admit the Yard of a Man, or not admit it but with very great Pain ; from whence follows an Aversion for Copulation ; to this Class belong likewise all the Faults of the *Vagina* and *Uterus*, just now related in the foregoing Chapter ; as also the Fatness of the *Omentum* or *Caul*, or the

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the Belly's, being too Fat and Prominent; all which may hinder the Introduction of the Yard into the *Vagina*; from whence that an impotence of Conception and Generation must arise is manifest to any one, that knows how absolutely necessary the Immission of the Sperm into the Womb is for Generation.

Another Cause of Sterility is Hatred between Man, and Wife; which, tho' there be no Fault in the Genital Parts is able to hinder the Operation of the Masculine Seed; because in this Case the Women perceive little or no Pleasure in Copulation, and consequently the Genital Parts can not so swell with Spirits and be heated, as to entertain and to imbibe the Sperm injected; for of this we must reason after the same manner, as we do of Victuals that are loath'd; which tho' they are not bad of themselves, are commonly hurtful.

The Coldness, thick Contexture, Scirrhus, and Cancerous Tumours, Ulcers, Dropsies, Obstructions, and Stoppages of the *Uterus*; as also its Looseness and Humidity contracted from a Miscarriage, or hard Labour, the Whites, or other Causes are able to occasion Sterility; either hindering the Masculine Sperm, from being imbibed in the Substance, or retained in the Cavity of the *Uterus*. What we say of the Frigidity of the Womb, proceeding from Cold and Waterish Blood, is to be understood likewise of its hot Temperament, proceeding from sharp and bilious Blood; by which the more Volatile and Spirituous Parts of the injected Sperm fly away, are dissipated and consumed, and consequently cannot have that effect in the Blood and *Uterus* of the *Woman*, which is required for Generation.

Besides these Causes, which are most all of the side of the *Uterus* and *Vagina*, there are others that belong to the *Testicles* or *Ovaria*, or the Vessels that bring the Sperm, or Eggs from the *Testicles* to the *Uterus*; which Causes holding in either Hypothesis, that of the Sperm, or the Eggs, are likewise able to produce Sterility; such are the bad Formation, thick Contexture, Softness, Exulceration, Hardness, calculous Disposition of the *Testicles*, or *Ovaria*; all which are able to hinder, either the Generation of Seed in the *Testicles*, or the Fecundation, Augmentation and Separation of the Eggs; without which *Women* cannot perform their Part of the Generation: If the *Testicles* or *Ovaria*;

and the *Uterus* being well constituted; the Vessels that bring the Seed or the Eggs to the *Uterus*, that is those which by some are call'd the Ejaculatory Vessels, and by the Moderns the *Tubæ Fallopiana*, are disordered; either by being stopt, too narrow, broken, or too far distant from the *Testicles*; which may chiefly happen to the *Tubæ Fallopiana*, which naturally Embrace not the *Testicles*, nor come near them, but in Copulation, as the Moderns think; then for want of a Passage of the Seed or the Eggs, into the *Uterus*, Sterility must ensue. Some alledge the Defect of the Menstrual Purgations, as a Cause of Sterility, and think that this is the reason, why young Girls and old Women cannot Conceive. But though I own, that the Fermentation which is made every Month in the Humours, of which the *Menstrual-Flux* is the consequence, contributes abundance to the Conception and Generation; because it dilates the Genital Parts, opens their Pores and Vessels, and gives the Blood a peculiar Constitution, by reason of which the Masculine Seed received in the Womb, or introduced into the Blood, is better provoked to Action; yet this is no Argument that the Conception and Generation can absolutely not be performed without the *Menstrua*. And that this is not a vain Opinion, is proved by the Observations of several Authors, Witnessing that many Women have Conceived and brought forth, that never had the *Menstrua*; tho' it is probable, that though the *Menstrua* did not flow, yet these Women had that Fermentation in the Blood, which is used to precede it; for this Fermentation contributes much to that Disposition, and widening of the Genital Parts that is required for Generation. We shall not Treat hear of that Sterility, which is Symptomatick, and follows upon other Distempers; as lasting Fevers, a *Palsy*, and other Chronick Distempers; for that has properly speaking no regard to the Genital Parts, or the Blood particularly vitiated, as to Generation only; but proceeds from Weakness and the Defect of Spirits, and the Depauperation of the Blood, which hinders other Functions, as well as the Generation.

To all the foresaid Causes we must add a certain Disproportion of the Masculine Seed with the Humours of the Woman; by reason of which, tho' there be no Fault either in the Man or the Woman, yet they cannot generate together: This is proved by a double Experience; for many that

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that Copulating together for a great while, could not Procreate, have proved Fruitful with others : and many Couples that Lived ten and fifteen Years without Children, have at last Procreated, as their Age changed : Yet it is to be suspected, that this is caused by an excessive Heat, or Coldness in both, or either Party, that extinguishes or dissipates the Spirituous Part of the Seed ; or because there is not *Heterogeneity* enough between the Masculine Seed and the Woman, by reason of which the Fermentation is made, which is required to Fæcundate the Egg in the *Ovaryum*, detrude it, &c. or if you will have it rather to make a Mixture, and Conjunction with the Seed of the Woman in the *Uterus*.

We shall not propose as Causes of Barrenness, Charms, Bewitching, some Poysons, and Plants, *Mint*, *Zizimbrum*, *Beans*, the Stone *Gagites*, the Privities of a She-Goat, or Mule, a *Saphir*, an *Emerauld*, &c. for besides that their power to produce *Sterility*, is questioned by many eminent Authors, and not without reason, I cannot see by what Mechanicks they can have that effect ; and consequently they are to be exploded by Physicians that admit nothing, but what is Mechanical.

As to the *Diagnosis* : If a Shutting up of the Privy-Parts, the *Vagina*, or the Orifice of the Womb, or a squeezing and Narrowness of the same, causes *Sterility* ; it shall be discovered by the Senses, and Signs already proposed : it shall be easily known likewise, if it proceeds from a Hatred between Man and Wife, Fatness, an Ulcer, Dropsy of the Womb, the Whites, Miscarriage, or a Hard Labour ; If an Obstruction, *Scirrhus*, *Cancer*, or Stoppage of the Womb causes Barrenness, it shall be known by the Signs related in their several Chapters ; If a cold or hot Temperament of the Womb, or Blood be the Cause ; it shall be known by the Signs of such a Temperament. If it proceeds from the thick Contexture, and a native ill Formation of the *Testicles*, or the *Vasa Deferentia*, it cannot be suspected by the Physicians, but in the Absence of the other Causes ; and this is seldom well known, but by opening of the Corps. The Defect of the Menstrual Purgations, either natural or Caused by something, occasioning *Sterility*, shall be manifest of it self, or from the Relation of the Patient. But the Disproportion, that ought to be between the Masculine Seed and the Humours of the Woman, can hardly be dis-



cover'd, unless there be in both a Temperament, that is either exceeding Hot or Cold. *Riverius* proposes other Signs to know whether Women be naturally Barren, viz. by Fumigations for the Privy Parts, *Garlick* or *Galbanum* put up in the same; and if the Smell of these strikes their Nostrils, when they turn their Head, it is thought they are not Barren; but these and other things proposed by *Riverius*, which I relate not, as being inconsiderable, are altogether uncertain, and a prudent Physician must not dwell upon them: For the intire *Diagnosis* of this Distemper; that is, when it proceeds from abstruse Causes; we ought to examine, whether the Fault lies not in the Man; for there Remedies would in vain be given to the Woman. The Sterility in Man then is known from the Distempers of his Genital Parts, as the Expulsion of the Seed being disorder'd, or wholly wanting, the Defect of the Seed, the want of Testicles, Scirrhus Tumours, a Debility, Frigidity, &c. but the bad Composure of the Genital Parts, that is of the Testicles, and preparing, or ejaculatory Vessels in Man, is not well to be discovered, and depends only on slight Conjectures.

As to the *Prognosis*: Sterility that is Natural, proceeding from a bad Formation of the Parts, is not hurtful; for it brings no harm to the individual Body, tho' it is Incurable: Of that, which depends upon other Causes, is to be Judged, according to the Variety of the Causes; for if it proceeds from the Straitness of the Privy Parts, the *Vagina*, or any other Shutting up, it is not easily Cured; unless the Causes proceed from a Natural Disposition. When the Sterility is owing to a Coldness, Heat, Tumours, Ulcers, and Dropsy of the Womb, or the Whites, the *Prognosis* is the same with that of those Distempers: That which is caused by Fatness, and the Prominency of the Belly, or the hatred between Man and Wife, is easier to be Remedy'd, because the Causes are slighter. That which is Occasioned by an ill Formation of the genital Parts, all the Physick in Nature cannot Cure; that which comes from the Disproportion of the Masculine Seed with the Humours of the Woman is more easily Cured, and ceases often of it self, by the change of Age.

As to the Cure: If the Distemper proceeds from a bad Formation of the genital Parts, or the thick Con- texture of the Womb, no Remedies, as being all useless,

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are to be Prescribed. But if it has its rise from any Obstructions, or Stoppages, the Suppression of the *Menses*, the Whites, Tumours, the Falling down, an Ulcer, the Dropsy, Heat, or Coldness of the Womb; or if it be Symptomatick, as owing to a Palsy, Fevers, and other Distempers, that are Chronick; it requires the same Cures, prescribed for those Distempers already, which therefore here I Omit. When Sterility proceeds from Fatness, and the Prominency of the Belly, it must be Cured by a spare Diet, Bleeding, and other things, that cause Leanness; when Hatred between the Parties occasions this Defect, they are to be Reconciled by all possible Means. Lastly, when the Disproportion of the Masculine Seed is the cause of the Sterility, the Temperament of the Blood Predominant in either is to be Corrected by proper Remedies: If there be Suspicion, that some Charms, or Witch-Craft are the Cause, as the Ancients thought frequently; you may besides Prayers use their Remedies, as the wearing of the Member of a Wolf, a Diamond, a Jacinth, St. *Johns*-wort, Rue, *Seayonyon*, *Sagapenum*, &c: Which may be seen in the Authors: but, as we do not believe, that there are such Causes, we give little Faith to the force of those Amulets. The Authors propose some Remedies, which are counted to be Specificks in a Sterility; these are most Beneficial, where it proceeds from the Coldness of the Blood, Womb, or genital Parts, or a Debility, and Defect of the Spirits, as well in the Man, as the *Woman*. Such are Venice Treacle, Mithridate, Confection of Alkermes, Conserve of Eringo Roots, Stander Grass, Ginger preserved, Wall-Nutts, and Nutmegs preserved, the Seed and Leaves of Rocket, Cresses, the Root of Smallage, the Kidneys of a Crocodil, Amber Gris, Musick, generous Wine, Cinamon, Saffron, the Seeds of *Ameos*, the Essence and Salt of Stander Grass, Pistaches, Spirituous Waters, Volatile Salts, and all things, that can Heat, and Strengthen. As to other things, which are call'd more Specifick; as the Womb of a Hare, a Bull's, or Stag's Pizzle, the after-Burden of a *Woman* dried, the Liver of a Pig, that is pig'd by it self, and many more of the same Nature, you must believe them, as you do their Authors. Outward Applications, unless made use of by way of Fumigation, Bathing, or Fomentation, are of no Virtue.

## NOTE.

‘The Causes of *Sterility* are either known and obvious to the Senses, or unknown, and hidden: the First consist for the greatest Part in a bad Disposition of the External Organs of either Sex, and a known fault of the Humours; but the latter most commonly depend upon the unfearcheable, or hardly to be discovered Faults, as well of the internal Organs, as of the Humours, and the Seed itself. It is further presumed, that in Case of *Sterility* the fault is more and oftener in the *Women*, than the *Men*, because there are more Manifest, as well as occult Causes, that may hinder Generation in the First, than in the latter, as will appear to any one, that but slightly examines this Matter.

‘Nor to meddle with the Causes of *Sterility*, that proceed from a known as well, as unknown Disposition of the Organs, I shall only propose the Remedies, that are either fit to mend and restore the *Crisis* of the Humours, and consequently the Seed it self, or thought by some specifick Virtue, or any other way to be subservient to Generation. Besides, the Stimulating Remedies, proposed by our Author, as *Satyriion*, *Eryngy*, sharp Seeds, *Crocodiles Kidneys*, *Saffron*, *Amber-greese*, *Spices*, and the like; which are equally Beneficial in *Sterility* proceeding from Frigidity and the Impotence of Men. There are some other Remedies, that without any Stimulation absorb the superfluous Humours in Men, as well as Women, dull the points of the Salts, restore the Firmness of the Parts, and are consequently proper in *Sterility*, proceeding from Hot or Cold Causes, or any other ill mixture of the Humours whatever.

‘Such are the *Diaphoreticum Martiale*, the Stomachical specifick, the use of which has been more than once Successful in this Case: of the same Efficacy is *Viper-Broth*, which not only nourishes and augments the Seed, but is apt to entangle and correct the Salts that cause the Whites in Women; this Broth ought not to be made with *Vipers* only, for that would be too nauseous, but with them you may boil young *Pidgeons* and *Chickens*, adding some *Mace* and *Cinnamon*, or a few *Cubebs*; the Volatile Salt of *Vipers* is likewise very proper in a very small Dose: the same may be said of *Milk*, with the Yolks of Eggs.

‘The Medicines that are recommended as Specificks, are the Decoction and Essence of *Sassafras*, Spirit of *Balm*, the Tincture of *Coral* with *Sassafras*, *Rose-mary*, and its Essence, the Testicles and Womb of a Doe, of which a Dram is the Dose; neither must we neglect the Remedies fetch’d from *Pismires* that are useful in the Impotence of Men, and *Sterility*: the Spirits and Essence of *Pismires*, as also Anointing the Uterus outwardly with Oyl of *Pismires*, or they make a Bath of Water, in which a whole *Ants Nest* has been boild; which Bath must

must chiefly be made use of after the Flux of the *Menstrua*. Hot *Mineral Waters* are here likewise of a wonderful Efficacy, as also *Chalybeat* and *Nitrous Waters*; but it suffices not, that the Blood and Humours are Corrected, or the Fault of the Parts is amended: for it is of no less concern in some Cases to draw the Spirits to the Parts that serve for Generation; which is impossible, if the Imagination of both be not fill'd with Vene-  
real Ideas; which cannot be done but by Reading Love Stories, and Amorous Discourses, and unless the wanton and juvenile Jokes and Toyings of the Lovers excite the drowsy and languid Venery. Pardon what I say, those sacred Rites are managed no other ways, and nothing can justly be call'd Unclean, to which Matrimony gives a Sanction.

## CHAP. XV.

### *Of the Acute, and Chronick Distempers of Women with Child.*

THE *Acute*, and *Chronick* Distempers of *Women* with Child are not of another Nature, than those, that invade other Men, and *Women*, and have been treated off, and examined heretofore; yet because the *Prognosis*, and Cure of the said Distempers differ in *Women* with Child, they seem to require a more peculiar Examination, by Reason of the Contrary Indications, that are fetcl'd from the Child, and Impregnation; therefore I wou'd Treat of them here in a peculiar Chapter, as they are consider'd in *Women* with Child.

A Distemper is call'd *Acute*, that quickly finishes its Course with Danger; and according to its Celerity it is called either *Acute*, or *Peracute*, and *Acute Ex Dequentia*; such are continual, and Malignant Fevers, the *Colera*, the *Miserere Mei*, a *Pleurisy*, a *Peripneumony*, an inflammation of the Liver, an *Apoplexy*, &c. A *Chronick* Distemper is that, which absolves its Course slowl, and lasts a Month, or two, or several, nay sometimes Years; of which there are two Sorts, the one, which is Dangerous, and commonly proves Mortal, as Head-aches, *Epiepsies* the *Hypochondriack* Obstructions, and many othe Diseases; the *Ætiology* of all which to repeat wou'd be Superfluous; wherefore I shall think it Sufficiet, to propose their *Prognosis*, and Cure, as being somewhat different from what they are in other People. Al *Acute*,

and



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and *Chronick* Distempers are much more Dangerous in *Women* with Child, than in any other Patients; and that not only, by Reason of their Debility of Strength, and the depraved Blood, wholly imployed in the Nutrition of the Child; but, also in *Acute* Distempers, by Reason of the Fever, or Preternatural Heat; which easily goes over to the Child; and by Reason of the spare Diet, which in those Distempers is to be injoynd, by which the Mother can hardly be Sustain'd; and Lastly, by Reason of the violent Remedies requisite for the Cure of a Distemper; which yet for fear of Miscarriage can not be so safely Prescribed; and in *Chronick* Distempers, tho sometimes there is not so much Danger, as in *Acute* ones, yet when they are Vehement, as an Epilepsy, strong Fits of intermitting Fevers, Periodick, and Obstinate Cholick Pains, the Child's, if not the Mother's, Life, is commonly in Danger; but where the Diseases are Mortal, as in the Phthisick, Dropsy, a perfect Palsy, there both the Mother and the Child are in equal Danger. *Chronick* and *Acute* Distempers are in Respect to the Child more dangerous in the First and Last, than any other Months of Child-bearing: Hence it is that *Hippocrates* says, that *Women* with Child at that Time must neither be Purged, nor Blooded, but only in the Months, that are between it: The Reason of this *Aphorism* (tho' it is not much regarded now adays) is that the Child, in the beginning and at the end of the Time, Sticks not so firmly to the *Uterus*. In the beginning, because the Ligaments are Weak, and the Child very Tender; but at the End, because the Weight of the Child it self Tears the *Placenta* from the *Uterus*; as ripe Fruit tears it self from the Tree, for want of due Aliment: For the Child, which really is a Fruit, is justly compared to Fruit, that in the beginning has a very Tender Stalk, and being ripe drops off of it self, but Hangs firmly the time between.

As for the Cure in *Women* with Child: It has respect chiefly to three sorts of Remedies, Diet, Bleeding, and Purging; tho' the Diet must be spare in *Acute* Distempers, as *Hippocrates* Says, yet the Ancients prescribe a more plentiful one to *Women* with Child, for Fear the Child might Perish for want of Aliment; but the Child, who partakes of *Acute* Distempers, as well as the Mother, wants at that Time but little Aliment, and consequent-

ly may Sufficiently be Sustained by a spare Diet, so it be not so to excess: For the more impure Bodies are Fed, the more they are injured: Add that the Distemper, and Fever are Increased by a Plentiful Diet in the Mother, and Consequently in the Child; That opening of a Vein makes a Child-bearing Woman Miscarry, is an Aphorism of *Hippocrates* that for bids Bleeding in Women with Child; whom many Physicians following, dared not to Bleed Child-bearing Women, especially in the first, and last Months of their Time, for the aforesaid Reasons; as also because by Bleeding the Aliment is drawn away from the Child, especially when it is pretty Large. But besides Reason, from which it is manifest, that what requires Bleeding in the Mother, requires the same in the Child, as Labouring under the same Distemper, which Increases, as that of the Mother Increases; and that the first Months, the Aliment is not drawn from the Child, as being very Small; and that, if it be drawn from it in the last Months, it is no more, than what ought to be done; because the Child being Sick can not Digest the usual Quantity of Food; as we said before; this is proved likewise by Experience: For the Observations of *Petrus Salius*, *Amatus Lusitanus*, *Rodericus a Castro*, *Riverius*, and other Practitioners of this Age Teach us, that Bleeding, when necessity requires it, can safely be Administred all the months of Child-bearing; for Bleeding exhausts the Blood not so much, unless it be too Copious, and done till the Patient Faints; but there is left enough in the Body, to Furnish the Sustenance, which the Child requires; nay there are many Women, that by Bleeding every month have prevented Miscarrying, to which they were Subject before; and others by the same Remedies have had good and Easy times, that were used to have hard Labours before: Shortly how safe it is to open a Vein in Women with Child is seen by your Strumpets, that by strong Purges, and Bleeding even in the Foot, have often in Vain endeavour'd to Miscarry.

Purging is likewise prohibited by *Hippocrates* in Women with Child, or at least he permits it not before the Third, and not after the Seventh Month; because the Child in the beginning, and at the latter End is not so well fastned to the Womb. Yet Reason, and Experience

both

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both have Taught us; that Purging no less than Bleeding may, and must, when there is a necessity for it, be performed in any Month of the Time; so it be not done Immoderately, and with Violence, or by Emetick Remedies. For in those Cases it is to be feared, that by the Agitation of the Body, the Provoking, and Pressing of the first Passages, the Child might be Shaken off. Nay if the Distemper be a Sleepy one, Dangerously Epileptick, or of another Nature, that can not be Cured, but by Emeticks and strong Remedies; they ought without Hesitation to be administered, without any regard to the Child; for it is better; that that Dies alone, than that the Mother is lost with it: Glysters may likewise, as I have said of Purges, be safely Administred. Other Remedies, as Sudorificks and Diureticks, as being less Dangerous, are more proper; but not such as provoke the Courses; and a *Medium* is to be observed in all things.

## CHAP. XVI.

### OF MISCARRIAGE.

*Miscarriage* is a Violent, and untimely Expulsion from the Womb of an Immature Child, that has attained to the Perfection, required for Birth; which Distemper always keeps the same name of *Miscarriage*, whether the Child be alive, or Dead, so it be excluded Immature, and before its Time. It must be at least Four Days after Conception, before it can properly be called a *Miscarriage*; For, what is voided out of the *Uterus* before, is not called a *Miscarriage*, but an Effluxion, or *Falsum Germen* a false Bud. All Women, of what Age or Temperament soever, so they be not too Old and unfit for Conception, are Obnoxious to this Distemper.

The Causes of this Distemper are twofold; Internal, and External: In the first Class are placed, first a *Plethora*, and Superfluity of Blood; by which the same, abounding in the Vessels, is agitated by the Menstrual Ferment; or by its Copiousness it easily opens the Vessels in the *Uterus*, and promotes the Menstrual Flux, and so the Child adhering to the Womb by the *Placenta* is  
Torn

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Torn off, and Falls more Easily. The Truth of this is manifest from the Experience of some Plethorick Women, that are used to Miscarry, if they Bleed not every Month, or at least every other Month of their Time: Secondly the defect of Humours, and Spirits; because thereby the Child is cheated of it's Nourishment, which is neither sufficient, nor pure; whence at last the Strings, that tie the Child to the Womb, being Debilitated, and, because of the Deficiency of the Humours, or their being, by Reason of the Depauperation of the Blood, too serous and Waterish, relaxed, the Child is easily separated from the Womb. Whence it is no Wonder, of Immoderate fasting, or Evacuation of Blood through any Part whatever, and other things that consume the Spirits, dispose Women to this Distemper. Thirdly the Excessive Bulk, and Bigness of the Child, especially in a Small and Narrow Womb; so we often see little Women Miscarry, especially when they are Married to Men of a Large Size: which is to be imputed not only to the Weight, which separates the Child from the Womb, or distends the latter too much, and Provokes it to Expulsion, but may in this Case also proceed from the great Jogging, made against the *Uterus*, by a Long and Improportioned Virile Member: Whence the Union of the Child with the *Uterus* is dissolved. To the Weight and Magnitude we may add also the Number of Children; for the more they are, the more they Weigh, and the greater Place they take Up; besides that they want more Nourishment; and this is the Reason why Women often Miscarry of two, or sometimes three Children, as I have seen it happen my self. To this Class belongs also a Dead Child, which by its Weight Provokes the *Uterus* to an Expulsion, as well as by its Corruption, and Rotteness, by which it Irritates the same.

To the Internal Causes we must likewise refer Distempers invading the *Uterus* near the time of Impregnation: As in Inflammations, Tumours, *Imposthums*, Ulcers, &c. or a Dropsy and a gathering of serous Humours within the same; for all these things hinder the separation of the Nourishment of the Child, relax the Substance of the *Uterus*, or cause Preternatural Contractions: Whence nothing, but Miscarrying can be expected: Lastly the

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Internal Cause of *Miscarriage* may also be Various Distempers as a Tenesmus, Dysentery, Looseness, Vomiting, Stone in the Bladder, Hysterick Passion, Troublesome Cough, Epilepsy, Obstinate Colick, Arthritick, Rheumatick, or any other Pain; a Continual, or Intermittent Fever, or an Inflammation of the Adjacent Parts; and that by giving the Spirits a disorderly Motion, Communicating the Irritation to the *Uterus*, or by Shaking and Agitating the same; all which are manifestly capable of Dissolving the Union between the *Uterus* and the Child.

In the Second Class, or among the External Causes of *Miscarriage* are rank'd Various Passions of the Mind; as Anger, Sorrow, a Fright, Fear; nay strong Catharticks, Violent Emeticks, or Medicines that Promote the Menstrual Flux, Dancing, Riding, Agitation of the Body, the Carrying of great Weights, Vociferation, a Fall, a Blow upon the Belly, Sneezing very often, Immoderate Venery, Strait Lacing, and Squeezing of the Belly with Wooden, Ivory, or Whalebone Busks; that are used for Handsomeness and Shape. It is Needless to explain, how every one of these Act, because their Operation may be Sufficiently Inferred from what has been said. The other Causes are all things, that by Agitating, Shaking and Pressing the Womb, or Provoking it to a Contracting, Disorders the Spirits, or any of the aforesaid Means, produce the same Effect.

*Miscarriage*, when it is come, manifests it self sufficiently; but the Signs that go before it and show, that it is Imminent, are a Heaviness of the Back, and Hips; and a Slowness to Motion of the same, by Reason of the Divulsion made in the Hypogastrick Region, and Consequently the falling down of the Humours towards those Parts, and their Obstrucling the same; as also by Reason of the Divulsion of the round Ligaments, that are fixed upon the Groins, and beginning of the Hips; as well as the Broad Ones, that are fastened to the Bones, the *Os Sacrum*, Hip-Bones and Neighbouring Parts: Besides, an Inappetency; because of the Agitation of the Humours, and the Separation, and Action of the Stomachick Ferment's being hinder'd, and Shakings and Shiverings also, proceeding from the same Motion of the Humours,  
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and the Separation of a sharp Serum in the Circumference of the Body, a falling down and Extenuation of the Breasts; because the Humours, that were brought to these Parts, affect other Passages, and are carried Copiously to the Uterus, or Neighbouring Parts.

If the said Signs are followed by continual Pains in the Lower Belly, down to the *Ossa Pubis*, and *Os Sacrum*, with an endeavour of casting out in the Uterus, it is a Sign, that the Patient is near Miscarrying; which is likewise always preceded by a Flux of serous, or pure Blood, proceeding from the Rupture of the Vessels of the Uterus, and Placenta, and of the Membranes, involving the Child; after which the Uterus, being Grown more sensible by the Rupture, excludes by the strong Contraction which it makes, the Child, that was contained within its Cavities; then the Belly falls down; which is followed by a greater, or Lesser Flux of the *Lochia*, according as the Vessels, that are broken, are many, or Large; and the Divulsion of the Placenta from the inward Surface of the Uterus is more, or less Violent; so that it is commonly followed by Copious Hemorrhagies, and sometimes other Symptoms; as *Synopes*, Faintings, Convulsions, &c. The fear of Miscarrying shall be the greater, the more Violent the Causes are, and according to the Badness of the Symptoms, the Miscarriage shall follow sooner, or later in one, two, or three days after.

The Causes of Miscarriage shall be sufficiently known, if you Observe what is gone before; and the Patients, and those about Her are well Examined.

As to the *Prognosis*: Tho' Miscarrying be for the greatest Part not Mortal, yet it is not without Danger; as well by Reason of the Hemorrhagies, as the Faintings, Violent Pains, and sometimes Convulsions; nay if it be Violent, a Dropsy, Scirrhus, Inflammation, Gangrene, and other Grievous Distempers, that commonly end in Death, very often follow. Those that often Miscarry Grow Barren, because of the Tearing of the Uterus; the Consolidation of which makes the Contexture of the Uterus thicker. In the first Months it is not so Dangerous, as it is in the other, because the Child is not so strongly fastened to the Womb, and Consequently may more easily, and without a great Hemorrhagy, be separated; yet  
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it is more Dangerous in Women, that never had a Child before, than in those that have had several, because the Passages are Straiter, and the Pains more uncommon.

*Miscariage* requires several Cures; one, when it is come, to oppose the following Symptoms; as the Debility of the Patient, which is done by Spirituous, and Corroborative Medicines, as we said of a *Syncope*; the Hemorrhagies, which is done by Astringent Injections, and Fumigations, Phlebotomy, and other things, proposed in the Menstrual Flux; Convulsions, Swoonings, Apoplexies, and other Grievous Distempers; which is to be performed by Remedies, prescribed in the Respective Chapters of those Distempers; or to be set down, where we shall Treat of the Distempers, Invading Women in Child-Bed; Miscarrying requires also another Cure, before it is come; either in the time of Child Bearing, when some inward, or outward Cause is gone before, from which it is to be feared; or out of that Time, when the Physician would cure a Woman, that is Subject to Miscarry, and hinder Her from Miscarrying again; which latter must be done by taking away, and Correcting the bad Dispositions, that occasioned the *Miscariages* before; and if this proceeds from a *Pletthora*, a Vein must be Breathed now and then; if from a Cachexy, or gathering of Serum in the Uterus, Zacutus recommends Burning; if from a Dropsy, Tumour, and other Distempers of the Uterus, make use of their Remedies, to be seen in their Respective Chapters.

In the time of Child Bearing, Miscarrying is prevented several ways, according to the Variety of the Causes; that, which proceeds from a *Pletthora*, or Inflammation, following upon it, is prevented by Bleeding, Cooling, and other Remedies, prescribed against the Inflammation of the Uterus; that where the defect of the Blood, and Spirits is the Cause, is opposed by restoring, Analeptick, Cordial, Spirituous, and Corroborative Medicines; *Venice Treacle*, Confection of *Alkermes*, and of *Hyacinth*, the Opiat of Salmon, Brandy, Generous Wine, Cinamon, Imperial Water, &c. where by the Largeness, or Plurality of Children, the Bulk and Weight in a Small Uterus is the Cause, there is little to be done against it; but where there is a Dead Child make use of what we shall prescribe  
lower

lower, when we Treat of the same ; that which proceeds from Tumours, or Ulcers, coming to the Womb, must be cured by Remedies peculiar to these Distempers ; if the Cause be a Looseness of the Uterus, and Ligaments, occasion'd by serous Humours, that are gathered there, it must be cured by gentle Sudorificks, and Medicines that attenuate, and consume the Humours, such as we have often mentioned ; intermixing them with Adstringents : that which has its Origin from a Bloody Flux, Vomiting, Looseness, Epileptick Fits, Tenesmus, Fevers, Pains, &c. requires the Remedies prescribed in those Distempers. But that which is owing to External Causes, Jumping, Riding, a Compression of the Abdomen, Exercise, Frights, carrying of great Weights, and other things, that Shake the Uterus ; besides the Precaution of shunning all those Violent Causes ; requires Medicines that are Adstringent, and restore the Firmness of the Uterus ; as Coral, Grains of Kermes, Pearl, Ivory, Rose and Plantain Water, the Roots of Tormentill, Syrups of Dry Roses, of Quinces, and other things, prescribed in the Immoderate Flux of the Menstrua ; From which Juleps, Powders, or Opiats may be made. Where Violent Medicines, or Poysons are the Cause, use the Remedies so often prescribed against those Causes ; which afterwards must be succeeded by Adstringents, and Corroboratives : In short the use of Adstringents is proper in all Cases ; especially, when the Child is not yet Torn from the Womb ; and so is that of Cordials most commonly, so there be no Fever or Inflammation. Plaisters for the Womb against a Rupture, and other outward Applications made of Adstringents, Fomentations, and Liniments have little or no Effect : As for the Amulets, which Riverius proposes ; as the Blood stone hung about the Neck, the Load-stone applied to the Navel a Turquoise, Coral, Emerald, the Bone of a Stag's Heart, &c. worn are Mere Imaginations, and Trifles : In the mean time Rest is strictly to be injoyn'd to the Patient, as well of the Mind, as of the Body : Copulation must be avoided, and all other things, that may injure the Patient : Phlebotomy, Purging, and Glysters, so they be not sharp, may and must likewise be prescribed, if a French Physician shall think it necessary, let the Distemper have its Origin from what Cause soever : As also Laudanum, if it shall seem required ; but when they,



actually miscarry and that it can not be prevented by the aforesaid Remedies, the Patients must be managed in the same manner, as they are in Hard Labour to which we now proceed.

## NOTE

‘ Among the Preservatives in general *Etmuller* recommends, of the Simples, Vervein, and the Extract, Water, Essence, and Juice of it, to be used Internally and Externally. ‘ The Grains of *Kermes*, and the Powder, *Tincture*, and Confection made of them are likewise of great Use. Ivory and ‘ all the Preparations of it, especially its Jelly dissolved in ‘ Broth, Cray-Fish taken any how, especially the Powder of it, ‘ which *Poterius* calls a Specifick in this case, the Juice of ‘ Cray-Fish in Wine, or Broth; Coral, and its Various Preparations. Outwardly to prevent Miscarrying they use Peppered ‘ Bread, Rubbed with Honey, strewed with Powder of Cloves, ‘ and applied to the *Regio Pubis*.

‘ When Miscarrying is feared from a Fright all Preparations of Ivory are proper; and so are the *Marquisses* Powder, ‘ the *Tincture* of Coral in proper Waters, adding Frankincense, and Mastick. When from Cold, they recommend Internally *Aqua vitae Mulierum*, Balsam of Embryons, and such ‘ Spirituous Remedies, outwardly they prescribe Anoynting ‘ with Oyl of Mastick, and some Chymical Oyl of Mace, and ‘ Cloves, with Balsam of *Peru*.

‘ If from Anger it be Feared, they recommend Ivory ‘ prepared without Fire in some Tart-Wine, and the Jelly of ‘ Ivory Acidulated. If from Gripings, the Peppered Bread ‘ just now prescribed is proper Externally, and Internally the ‘ Powder of Zedoary, either by itself, or upon Bread and Butter.

‘ Of the Adstringents as Bistort, Tormentill, Milfoyl, Plantain, the Remedies of Mastick, and Quinces, as also of the ‘ *Pulvis Augustanorum* against Miscarriage, I say nothing, because ‘ these are Vulgar Remedies. Where a Miscarriage is threatened from a Relaxation of the Uterus they apply *Bdellium*, and ‘ Mastick Dissolved in Vinegar, in the form of a Plaister to ‘ the Lower Belly; some, where a Miscarriage is Imminent, ‘ apply Yest under the Navel, and Loys; *Aluminous* Baths ‘ recommended by some, seem not very safe; because by ‘ straitning the Vagina they Cause a Hard Labour: So far *Etmuller*. As to the *Aluminous* Baths; this Remedy may be ‘ used, as a preservative by way of Precaution, before they ‘ are Pregnant; that the Uterus, being too moist, may be ‘ dried: Nay Nitrous Waters, which are sometimes Erroneously ‘ called *Aluminous*, are very usefull in the same Case; ‘ If the Hemorrhagy, that follows upon Miscarrying, ‘ be too great, it is Cured by the same Remedies, which ‘ lower are prescribed in the excessive Flux of the *Lochia*.

## C H A P. XVII.

*Of a Hard LABOUR.*

**A**S that *Labour* is called Natural, which, the Mother, and the Child being both well, begins at the set time, without any Violence of Symptoms, and is performed with ease, that is without extraordinary Pains, within Twenty Four Hours at most; so on the other hand that is called *preternatural*, and *Difficult*, where the Mother, or the Child, or both are in Danger; where the Laws of the ordinary Cause are exceeded, that which lasts longer, and is attended with very Violent Pains, and other Grievous Symptoms.

The Causes of *Difficult Labour* are either owing to the Mother, or to the Child, and to the *Uterus*, and the genital Parts. First on the Mother's Side a Debility; which is either Natural, or Contracted from Sickness, or elsewhere may occasion *Hard Labour*; for by Reason of that, the Patients are not able to bear the Throws of Child-Birth, or to perform the Endeavours that are required to the exclusion of the Child: On the Part of the *Uterus* there are many things, that may hinder the Exclusion of the Child: Such are all things, that oppress, and shut the Passage, through which the Child is to go: As excessive Fatness, and Thickness, an Ill Formation of the *Vagina*, as in Cripple, and Crooked Leg'd Women, a Stone or Tumour Possessing the Bladder, or Strait-Gut; Tumours, Ulcers, Obstructions of the *Uterus*, and the Orifice of the *Vagina* and Privy Parts in a Shutting up of the Womb; and a *Preternatural* Straitness of the *Vagina*, &c. which we have already related. Of the Child's Side there are many things likewise, that may render Child-birth *Difficult*; First when it is Dead, by its Coldness Diminishing the Sense of the *Uterus* and consequently the Motion, and not Stimulating it to a Contraction by its Motion, and Agitation; as it does, when it is alive: Secondly, when the Child is very large, distending the *Uterus* too much and beyond its Strength; and so hindering its Contraction, or when it has a large Head, that cannot pass through the upper Orifice of the Womb, or the Privy Parts. Third-

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ly when the *Uterus* contains more Children, than one, for the same Reason: *viz.* The great Fullness, and Distension of the *Uterus*, which makes, that it cannot contract it self; and hence it is, that where there are Twins, there is a *Hard Labour* commonly. Fourthly, when the Child comes in a wrong Posture; that is, when it strives to get out not with the Head, but the Hands, or Feet foremost; or when it would come out double, and the Belly or Back-side offer themselves to the Orifice. The After-burden likewise may be the Cause of *Hard Labour*, tho' it happens but seldom; *viz.* when the Membranes, that involve the Child, are very hard, and are not easily broke, that the Waters may flow to make the Passage slippery; or when together with the Child they stick by help of the *Placenta* so close to the *Uterus*, that they cannot be Torn from it: besides these Internal Causes there are likewise External ones; as a Blow, a Fall, Wounds, &c. that may be the Occasion of a *Hard Labour*, by destroying the Child, or the Firmness of the *Uterus*; likewise an unskillfull Midwife, erring in her Offices, either by promoting *Labour* too soon, or not turning the Child well, when it offers it self in an ill Posture: As to the unnatural things; a Cold, and dry Constitution of the Air, hot Weather, or Northerly Winds, raw Food, untimely Motions, retaining of the Excrements, various Passions of the Mind; all these things, tho' they cannot well absolutely hinder the Birth, yet Joyning with other Causes augment much the Difficulty of Child-birth.

The Difficulty of *Labour* is sufficiently known of it self; as also by the time, that the Women are in Pain, and moreover by the returning of the Throws, and their tending more to the Back, than the Privy Parts. The Signs of the Causes, the Debility of the Woman, the Thickness of the Fat, the Shutting up of the Womb, by Tumours, Ulcers, and Obstructions, may be known from the Relation of the Patient Herself, or they may be seen, or easily gathered from what has been said in the preceding Chapters. The Signs of a Dead Child shall be given in the next Chapter: the Bigness or Plurality of Children must be known by the Stature of the Parents, and the Excessive Bigness of the Belly: That the Child adheres too closely to the Womb shall be known by the Absence of the other Causes; or at least may be guess'd when the Waters

break

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break not. The wrong Posture of the Child may be known by feeling.

As to the *Prognosis*: all Hard *Labours* are full of Danger, and therein sometimes the Mother, sometimes the Child, and sometimes both are kill'd: if the Woman be four or five Days in *Labour*, it is hardly Possible, but the Child should Die: Convulsions, as also Sleepy Distempers to Women in *Labour* are most commonly Mortal: but Sneezing is good says *Hippocrates*: because it helps something to promote the Exclusion of the Child.

The Cure of a Difficult *Labour* consists in taking away, if possible, all the Causes, that can retard it; I say, if possible; for exceeding Fatness, a natural Straitness, and ill Formation of the *Vagina*, the Largeness, and Plurality of Children, or the Child's being Dead cannot be remedied; tho' the Debility of the Mother may by Remedies prescribed in a *Syncope*; so may likewise the preposterous Posture of the Child be remedied by pushing it back so long, till it offers the Head, laying the Woman in a due Posture: viz. backward with the Head downward, and gently pressing the *VVomb* upward: but if the shutting of the genital Parts, or the various Distempers of the *VVomb*; as Inflammations, *Scirrhi*, Ulcers, Gangrenes, or Tumours, possessing the Bladder, or strait Gut, are the Occasion of a Hard *Labour*, you must use the Remedies, prescribed in those Distempers: the Remedies to promote the Exclusion of a Dead Child, shall be related lower. Besides all this, and the faults of the External Causes, the Abuse of the Six unnatural things, which commonly augment the Difficulty of *Labour*; the Errour of the Midwife, the close Connexion of the *Placenta* with the *Uterus*, &c. may occasion the same; but, from what Cause soever it proceeds, always make use of the following Remedies, which promote *Labour*; As Cinamon, and Imperial Water, a Spoonful or two given now and then; the Powder of Cinamon with Saffron, Confection of Alkermes in Broth, or with Saffron in Wine, Dittany of Crete, the Roots of Birthwort, the Troches of Water-Lillys. The Waters of great Bur, and Mugwort are of great Virtue; Yet Oyl of Amber, the Essence of Cinamon, Savin, the Extract of Saffron in small Doses, and given to a few Drops, or Grains, are more Powerful; Snuffs, to make them Sneeze, are sometimes beneficial; as *Euphorbium* White



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Hellebore, Pepper, &c. Bleeding may be likewise prescribed in several Cases; especially where the Patient is not Weak, and then it is often of great effect. Sharp Glysters are very beneficial, as also Emollient, or Corroborative Fomentations, according to the Various Disposition of the Uterus, and the Child. As to the Specificks prescribed by *Riverius*, either to be worn or applied, a Physician ought to have no Faith in them. When all Hopes of Delivery are lost, and the Mother is very near Death, some make use of the Cesarean Cut; but it is very Dangerous, and Horrid, and succeeds seldom well, wherefore it is never to be attempted.

## N O T E.

• The Cholick Pains, coming often to the Pains of Labour, which then are called Spurious, we ought to be very Diligent in Distinguishing between them in this Case; besides Carminative Glysters, they give *Elixir Prop. Par.* without Acids in some Wine; as also Spirit of *Sal Armoniack* impregnated with Spices, and bitter Medicines, and Joyn'd with Spirit of Wine; which is proper likewise in the true Pains.

• In this Case they recommend also an Infinite Number of Specificks, to be taken inwardly; there is an Oyntment made of *Snake-skins* with *Fox-Grease*, and the Juice of Cray-Fish, that does Wonders if the Belly be anoynted with it. Among the ridiculous Remedies may be counted, what *Hartman* has of the Eyes of a Hare Powdered, and rubbed upon the Crown of the Head, tho' some Physicians Speak of it, as if it was an expert Remedy: Inwardly they Praise the Flow-ers of Blew-Bottle, and Larks-Heel, Marigolds; the Yellow of White Lillys, Penny-Royal, Balm, and the seed of Lavender; a Draught of the Husband's Urine, Horse-Dung in Wine, the Spirit of an After-Burden of a Woman brought to Bed of Her first Child; the Preparation of which see in *Etmuller*: Half a Dram, or a Dram of the Powder of the said After-burden is given with the like Success in Penny-Royal Water; they Praise likewise the Spirit of Soot, whose Powder is given also to a Dram; Castor, and its Tincture, White Amber, and its Oyl, or Salt; Borax from a Scruple to a Dram, of which and Cinamon, and the Bones of Dactyls with Myrrhe, and a little Saffron, they prepare an Efficacious Powder: Horse Stones, which are added to the said Powder, or given by themselves in Wine, or Specifick Waters; the Liver of an Eel, or Snake; Quick-Silver; two or three Grains of *Aurum Fulminans* Oyl of *Halle-Nuts*, Twelve Drops

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' Drops are given inwardly, and the Belly is anoynted with  
' it outwardly: Opiats are likewise of use sometimes, if cautious-  
' ly given, when they have been long without Sleep, and  
' the Strength decays. Vomits themselves have been known  
' to be of great Efficacy to some Women; but above all  
' Bleeding is very useful, and ought never to be omitted; be-  
' cause it is constant from Innumerable Experiments, that  
' this Remedy has been used in this Case with great Suc-  
' cess.

' Since Part of the same Remedies are made use of to ex-  
' pell a Dead *Fetus*, I shall make no Remarks upon the fol-  
' lowing Chapter:

C H A P. XVIII.

*Of a Dead Child in the W O M B.*

**A** Child, bred and contained in the *Womb* is not only  
excluded sometimes too soon, and makes not only  
the Labour sometimes very Difficult by its Bulk, or  
when there is more than one; or when it comes in a  
wrong Posture; but it happens likewise sometimes, that  
it is kill'd, and dies in the very Porch of Life, before it  
has enjoy'd Light: and so brings the Distemper, of which  
we now are to Treat.

The Child either dies in the Womb a great while be-  
fore its Ripeness; and so, when excluded, makes a Mis-  
carriage; or it is killed near the Ninth Month, or in the  
very instant of the Time of Child-birth, by the great  
and lasting Difficulties of a Hard Labour, or being ex-  
tinct, long before the time of Child Birth, it is Longer  
retained in the Womb, and becomes to be of that Species  
of Hard Labour; which with *Riverius* I had a Mind to  
distinguish from Hard Labour in general, and of which I  
shall treat particularly under the notion of a Dead Child  
in the *Womb*.

The Causes that kill a Child in the *Womb* are the same  
with those, that cause Miscarriages, and Difficult La-  
bours; as all the Distempers of the *Womb*, a Blow; a  
Fall, a Wound, Riding, Dancing, Carrying of Weight,  
acute, and violent Distempers, Strait-Lacing, &c. the  
Straitness of the Passages, through which it must come, a  
Debility of the Mother, the excessive Bulk of the Child,

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The Plurality of Children; its Close adhering to the Uterus, its preposterous Posture, &c. how all these Causes, and especially when they are Violent, hasten the Death of the Child, is easily understood, and gather'd, from what has been said about Miscarrying, and Hard Labour.

The Child is known to be Dead, when it is moved no more in the Womb, tho' the Mother takes Spirituous, and Corroborative Medicines: There is a Sense of Cold in the Hypogastrick Region; for want of Motion in the Humours of the Child, and then there is likewise a Heaviness: And when the Woman turns her self from one Side to the other, She feels something, that's ponderous, like a Log, rowl from one side to the other, for then, tho' the Child be not Increased in Bulk, it weighs more; because the Fermentative Motion of the Spirits, and Humours, which contribute much to the Lightness of an Animal, is Deficient; and this is the Reason, why Dead Bodies weigh more, than live ones; and those that have fasted long, than others, that have filled their Bellies. Besides, when a Child is Dead in the Womb, the Mother's Face Looks Pale, because her Blood is Vitiated, and its Motion made slower by the Corruption, and Frigidity of the Child; her Breasts grow flaggy, because her Blood vitiated in its Mixture, by the *Effluvia* exhaled from the Dead Child, Furnishes no good Chyle, as before, that is separated through the Glandules; and because the Strainers of the Milk, which stood open before, now fall flat; because the Motion of the Spirits, and Humours is defective; and exercise their Office no more. The Eyes are not so lively, by reason of the defect of the Spirits, and if the Child stays long by Reason of the Rottenness, and Corruption which it Contracts, it sends forth Fetid Exhalations, and Mattery Humours: through the Privities, brings Convulsions, and because of the Putrid Particles, Penetrating in to the Blood and Lungs of the Mother, Communicates the Foul Stink to all the Body, and the Breath of the Mother.

As to the *Prognosis*: a Dead Child in the Womb is very dangerous; and if it be not quickly excluded, brings Fevers, Faintings, Syncope's, Convulsions, and at last Death; especially when it begins to Rot; for if without Rottenness the office of nutrition be still perform'd in it as in a Lupia, Warts, Scrophulous Swellings, and Fleshy Excrescencies; so that destitute of its own, it depends on the Life of the Mother

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Mother; then it may be retain'd for several Months, nay Years, without killing, or doing harm to the Mother: Witness the many Observations of *Schenkius*, and that which is lately made of *Monfieur Baile* at *Tboloufe*; nay some have likewise observed in Robust Women, whose Wombs were of a firm Structure, that even corrupt Children have not kill'd the Mothers, but been voided through the Parts, sometimes through the Privities, sometimes by Stool, the Uterus and Strait Gut being open'd, and sometimes through the open'd *Abdomen*.

The Cure of a Dead Child in the *Womb* wholly consists in the excluding and pulling out of the same. The Exclusion of it is promoted by the same Medicines as were proposed in *Hard Labour*, which therefore need not to be repeated, and out of them you must chuse the Strongest; as the Troches of *Myrrhe*, round *Birth-Wort*, *Dittany* of *Crete*, *Savin*, and its Essence, a Dram of *Borax* and extract of *Saffron*, the Essence of *Cinnamon*, Strong Snuffs, and even Vomits, if it be safe (as *Angelus Sala* witnesses) to exhibit things that agitate and squeeze the Uterus to expell the Child; Purges likewise and strong Glysters, if they may safely be used; because, whilst they provoke Stools, they likewise provoke the Exclusion of the Child; some recommend a few drops of Oil of *Water-Lillies*, others Oil of *Amber*, others again the Stones of a Horse dried, which, as well as Horse-dung, they keep as a Secret. As to outward Applications, Fomentations and Cataplasms are proper, as also Baths made of emollient Remedies, or Oil, Anointing the Belly with the Ointment of *Sow-Bread* helps sometimes; Fumigations of an Emollient Decoction, or Galbanum, but especially sharp Pessaries, thrust into the *Vagina*, made of *Birth-Wort*, *Coloquintida*, *Agarick*, Black *Hellebore*, the Gall of a *Bull*, *Euphorbium*, the Powder of *Hiera Picra*, the Juice of *Rue*, *Wild Cowcumbers*, *Gum Ammoniac*, *Oppoponax*, *Sal Gemma* and *Nitre*, all which are mix'd with boil'd Honey, and made up like Suppositories, or powdered they are put into little Baggs, wetting them in *Savin Water*, or a Decoction of the same.

If these things have no effect, you must proceed to the pulling of it away by the Hands of the Midwife or Surgeon, anointed with Oil, or Instruments made with Hooks for that purpose, that are put into the Uterus, to take hold of, and draw away the Child: How this Operation is performed



form'd, and what Cautions are to be taken, you may see in *Paul Aegineta*, and other Surgeons. Mean while it happens sometimes, that by reason of the preposterous Posture of the Child, the Legs or Arms come first; then those Parts must be taken hold of, and the Child be drawn out that way, if possible; otherwise those Parts must be cut off, and the Child lessen'd in bulk is afterwards more easily pull'd away. Let the Patient have always Corroboratives, and the best of Meats.

## C H A P. XIX.

### *Of the Retention of the After-Burden.*

**T**O a natural Birth, and the happy Delivery of the Woman, it is not enough that the Child, after the breaking of the Membranes that involve it, and the flowing of the Waters contained in them, comes out of the Womb, and is Born; unless with that also come those Membranes with the *Placenta*, which are called the *After-Burden*; because they come after the Child, by reason of the Continuity, and Connexion they have with the Child, by means of the Navel-String. Therefore if this *After-Burden* for what reason soever, follows not the Child, and after that is Born be detained in the Womb, it is preternatural, and Constitutes that Distemper, of which now we Treat, that is *the Retention of the After-Burden*, which commonly brings very grievous Symptoms upon the Mother.

The Causes of this *Retention* are several: and first, too close a Connexion of the *Placenta* to the *Uterus*, by reason of which, tho' the *Uterus* contracts it self, to exclude the Child, and that breaks the Membranes and is Born; the *After-Burden* yet is retain'd in the *Uterus*, and then the String is either broken or stretch'd; and tho' it be pull'd hard, yet the *After-Burden* follows not. The other Cause of the *Retention* of the *After-Burden*, is the breaking of the Navel-String, from what Cause soever; which after the Child alone is excluded, is commonly followed by a strong Adstriction of the Neck of the *Uterus*, by reason of the Pain caused by the Distension, and thence a *Retention* of the *After-Burden* succeeds. This String may be broke for several Reasons; the Unskillfulness of the Midwife, pulling the Child too hard, or cutting the String too soon; the weight it self, of a large Child, especially if the String be thin; lastly, the loss of Strength in a Hard Labour

may

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may occasion the *Retention* of the *After-Burden*; because after the Exclusion of the Child the *Uterus*, in that case is not able to contract it self so strongly, as to expell the *After-Burden* remaining in its Cavity; and this is commonly occasioned by too great a Distension of the Neck of the *Uterus* and *Vagina* (as we spoke off) in the Exclusion of a large Child, and consequently Pain; which makes that the Child is no sooner excluded, but the Orifice of the *Uterus* contracts it self strongly; and so the Navel String being most commonly broke, retains the Membranes and the *Placenta*. The External Causes, that might dispose the Patient to this Distemper, are first Cold taken in the Womb in Labour; because the cold Air, either provokes the Neck of the Womb to a sudden Contraction, or got up into the Body of the Womb infringes its contractive Power: Secondly, a Fear and Fright, seizing the Patient when the Child is in the Birth; because by the sudden Motion of the Spirits (the Child being excluded) the Orifice of the Womb is violently contracted: Thirdly, the Imprudence and the Forwardness of the Patient, who urged by the Pain sometimes, refuses to contain herself in a due Site, and Tumbles and Tosses; whence follows, either the Contraction of the Neck of the *Uterus*, or the breaking of the Navel-String, and consequently the *Retention* of the *After-Burden*.

The *Diagnosis* of the *After-Burden's* being retained is so easily known of it self, that we need say no more of it; yet when a small piece of the *Placenta*, or the Membranes, by being broke, is separated from the rest, so that it remains in the *Uterus*, which sometimes happens, tho' rarely, then it is not so easily known; yet the Signs of it are, that after Delivery the Womb persists still in the Expulsion, that is suffers continually contractive Motions, because of the Sense of Irritation, which the little piece of the *After-Burden* makes; as also that sometimes a Sense of Pain and Irritation remains in the Womb; and that in tract of Time, from the Corruptions and Putrefactions, which the retained piece has contracted, a Foul and Cadaverous Stink exhales from the Womb:

As to the *Prognosis*; the *Retention* of the *After-Burden* is very dangerous; and if it be not quickly expelled, by acquiring a Stinking Putrefaction, it brings very grievous Distempers, as *Acute Fevers*, an *Inclination to Vomit*, *Faintings*,

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*ings, Syncope, an Hysterick Suffocation, Epileptick Fits, Cold Sweats,* and at last Death; yet it may sometimes be cured, if the Patient be robust, and has an *Uterus* of a firm Contexture; as the Operations witness, that it has often been done.

This Distemper is cured altogether with the same Remedies that are used in a Hard Labour, and the Expulsion of a Dead Child; for the Indication for the Cure is the same in all these Distempers, *viz.* to promote the Exclusion of what is contained in the *Uterus*, and the Remedies that are of use here, may be seen in the foregoing Chapters: yet there are some things, which the Authors call Specificks in this Distemper; such are the Stones of a Horse dried and powdered, thirty Drops of Oyl of *Juniper*, the Juice of *Leeks* and *Onions* drunk in Wine, the Juice of *Lovage*, *Borax Mineral*, Vomits, Snuffs, Fomentations, &c. alledged in the said foregoing Distempers, not neglecting the *Universalis*, if the necessity requires them; but among all the Remedies, nothing is more recommended than the Hands of an expert Midwife, or Surgeon, as we said of a Dead Child; or Chirurgical Instruments, that put into the Womb take hold of, and draw out the *After-Burden*, before there comes an Inflammation or Inflation; taking care that it be not done too violently, for fear of an *Hemorrhagy*: If the *After-Burden* sticks so close to the *Uterus*, that it cannot be brought away, and remaining in the *Uterus*, corrupts and putrifies, then make use of Injections; which must be sometimes Emollient, to dissolve the close Connection; sometimes Cleansing and Vulnerary, to wash away the Filth, and hinder the Corruption of the *Uterus*; adding sometimes *Basilicum*, to evacuate the Suppuration, *Egyptiacum*, sometimes Sugar and Honey, and even the *Collyrium* of *Lanefrancus*, if you think it necessary.

### N O T E.

‘In the Retention of the *After-Burden*, besides the Remedies related before, a Fumigation of *Leeks*, boiled in Wine is proper: prescribe also sharp Glysters, in which the Roots of *Birch-Wort* and *Sow-Bread* are boiled.

## C H A P. XX.

*Of the Immoderate Flux of the Lochia, or Child-Bed Purgations.*

BY *Lochia*, the Physicians understand nothing else, than that Flux of Blood, which after Child-Birth is used to flow

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flow by degrees for 3, 4, 5, 6 days, and differs from the *Menstrual Flux*, in that the latter is made by an opening of the Passages in consequence of a certain Fermentation of the Blood, which is used to be raised every Month in the Humours of Women, and Adult Virgins; and that by reason of a peculiar Contexture of them, and a gathering of their own Fermentative Humours, which is certain and prefix'd in the same.

But the Flux of the *Lochia* invades none but Child-Bed Women, and such as have Miscarry'd; not in consequence of any Fermentation of the Blood; but a divulsion and separation of the *Placenta* fasten'd to the Womb; which makes that the Extremities of the *Uterine Arteries*, which gaped towards the *Placenta*, now the same with the Membranes is separated and torn off, shed Blood, because their Orifices are open. Therefore if this Flux keeps within the bounds of Nature, that is, if it be Moderate, made by degrees, not in abundance, and terminates quickly, it is good; but if it be copious and lasts long, it must be call'd Distemper'd and Immoderate, and in this Sense we shall consider it. Tho' first it is to be observed; that there can be no certain Quantity of flowing Blood, nor any Duration of this Flux prefix'd and determin'd to Child-Bed Women; because all Women are not of the same Temperament, Age, Stature, nor have they all the same way of Living, Fulness of Blood, Fatness, &c. whence some shed a greater, others a lesser quantity of Blood, and some have this Flux a great while; in others it is of less Duration; wherefore the Excess of this Flux is known best by the loss of Strength, and the uneasiness of the Patient; for where these Symptoms are, it may be called a Preternatural and *Immoderate-Flux* of the *Lochia*, especially if great quantities of Blood, and much at a time be voided; or if it continues for a great while.

The Cause of the Child-Bed Purgations flowing immoderately is only too great an opening, and Dilaceration of the Vessels of the *Uterus*, made in a difficult Labour, or occasioned by the Midwife's violently pulling away the *After-Burden*; for since the Flux of the *Lochia* is only caused by the Separation of the *Placenta* from the *Uterus*; to which it adheres all the time of Child-Bearing, so that it is an Instrument of Passage for the Humours of the Mother into the Child, the more strong and violent the Separation and Divulsion is, the more the Vessels in the concave part of the

the



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the Womb will be torn, and so either being open'd too much, or hard to consolidate they void Blood immoderately.

Therefore all the violent Causes whatever, as a Blow, a Fall, Jumping, Sneezing, Vomits, &c. named in the Chapters of Hard Labour, and a Dead Child, may make such a violent Divulsion of the *Placenta* from the *Uterus*; and whether it be before or in Labour, are able to cause an *Immoderate-Flux* of the *Lochia*, which is increased by a *Plethorick* Constitution, or the Thickness and Acrimony of the Blood.

The *Immoderate Flux* of the *Lochia* is not only known by the great Quantity of Blood voided; its Continuance, or coming aways in Clods; but also by the Loss of Strength, and Defect of Spirits, Loathing of Victuals, a low, and frequent Pulse, all which Symptoms argue the Defect of Spirits; the Convulsions if they ensue, proceed from the Depauperation of the Blood, which after an *Immoderate Flux* disorders the Spirits; for when the Mass is much diminished it can not keep its due Mixture, and Disposition.

The *Prognosis* is, that, if all *Hæmorrhagies*, or at least all *Immoderate* ones, are Dangerous, because in them the Treasure of Life, viz. the Natural Heat is exhausted, then without doubt the *Immoderate Flux* of the *Lochia* ought to be called full of Danger; as coming upon the Patient, when the Strength is already much impaired by Hard Labour, or Miscarrying. Yet there is more, or less Danger, according to the greater, or lesser Quantity of Blood voided, the Duration of the Distemper, and the Grievousness of the Symptoms; wherefore *Hippocrates* says; if a Convulsion comes, or a great Faintness upon the Flooding of a Woman, it is Bad.

The Cure of the *Immoderate Flux* of Blood consists wholly in the Stopping of it, with this Caution, that what Quantity of Blood ought naturally to be voided after Child Birth, is not retain'd; therefore the Cure is not to be entered upon Immediately after Child Birth, but when the Physician Judges, that there has been Blood enough voided.

These things, that restrain the *Immoderate Flux* of the *Lochia*, are Bleeding, if the Strength will allow it; in the Arm not in the Feet; a Thickning, Cooling, or Adstringent Diet; things made of *Almonds*, *Oats*, and *Rice*;  
Tolks

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Tolks of Eggs, the frequent use of *Juleps*, *Rose*, *Plantain*, *Lettice Water* with *Bole Armoniack*, *Troches* of seal Earth, *Dragons Blood*, *Coral*, *Pearl*, with the *Syrup of Dry Roses*, or *Quinces*, *Sal Prunell*, *Syrups of Coral*, or a Decoction made of *Adstringents*, as *Plantain Leaves*, *Milfoyl*, *Wallwort*, the *Root of Knot-grass*, *Grains of Myrtle*, *Balaustians*, and the *Rinds of Pomegranats*, adding the *Depurated Juices of Plantain*, *Mille foil*, and especially *Nettles*; which beyond other things, is able to restrain Hemorrhagies; the *Conserves of the Roots of Wallwort*, *Roses*, *Succory*, *Wild Roses* are likewise proper in this Distemper, in which you may give the *Troches of Karabe* with *Sloes*, *Pearl*, *Coral*, *Frackincense*, &c. For an Opiat; adding some *Adstringent Syrup* to it; if there be occasion for Purging from what Indication soever, let it be gentle of the *Pulp of Tamarinds*, *Cassia*, *Manna*, *Rhubarb*, *Compound Syrup of Succory*; that it may not Violently stir the Humours. In the mean time, the Patient growing Weak, as it happens commonly, prescribe now and then the *Spirituos and Corroborative Remedies*, often mentioned, that she may be able to bear the Distemper. The outward Applications, that are proper, are *Fomentations for the Lower Belly of Oxycrat* or an *Adstringent Decoction*, or a *Fumigation of Hot Oxycrat* or the said *Adstringent Decoction*; *Adstringent Injections* may likewise be used, adding the aforesaid Juices *Sal Prunel*, and some Drops of *Vinegar*, or other *Acids*.

If there be a Suspicion, that there are Clods of Blood in the *Uterus*, the Patient must be set in a Straight Posture, that they may fall down, and a *Detergent Injection* is to be exhibited.

### N O T E.

‘ Besides the Simples set down by our Author against the *Immoderate Flux* of the *Lochia*, they Praise the *Water-Willow* with the *Purple Flower*, as also the *Hamatitis*, the *Adstringent Saffron* of Mars, the *Antihæctick of Poterius*, *Opiats*, *Chalybear Water*, *Crude Allum*, from a Scruple to two Scruples in Conserve of *Roses*, the Preparations of *Amber*, and especially its *Troches*, the seed of *Lask-Wort*, a Dram of it being taken in *Plantain Water*, see the other Remedies set down in the Chapter of the *Hæmorrhagy*, or the *Immoderate Flux of the Menstrua*.

‘ The *Water of the Spawn of Frogs*, *Soot* made up with *Vinegar of Roses*, and the *Ointment of the Countess* are applied

applied Externally. Lastly they use a Girdle with the Leaves of Black Hellebore, which has been tried by *Hartman*.

If this Flux continues by Reason that a Piece of the Placenta or a Mooncalf be left behind, prescribe Glysters made of a Decoction of Motherwort, Mugwort, and Camomill, adding to it Mercurial Honey; in the mean time neglect not the use of Adstringents mixed with expelling Remedies.

## CH A P. XXI.

### *Of the Suppression of the Lochia.*

THE Suppression of the Child-Bed Purgations, and their Diminution are not less Preternatural, than their Flowing too copiously and immoderately; the reason of it is, that as from the voiding great quantites of Blood after Child-Birth, many and grievous Symptoms proceed, so from the Suppression of that Flux of Blood, which moderately ought to continue for some Days, many and no less grievous Evils arise; as Acute Fevers, Phrenzies, Madness, Melancholy, Convulsive Motions, Internal Inflammations of the Lungs, Liver, Uterus, &c. Because the Blood in the Substance of the Uterus, and the Vessels dispers'd through it, Stagnating, that is slowly Circulating, all the time of Child-bearing, and especially about the latter Months, by reason of the Pressure of the Child, now grown bigger, is foul, and by its Stay in the Uterus more Fermentative and exalted in Acidity; for which reason, if the Child being excluded, it may not come away it self, but is retained in the Mass, and mix'd with it again; when it is carried to the Brain, it variously Agitates and Disorders the Spirits, or makes Explosions in the Nerves and Muscles; or lastly, it raises Fermentations and Turgescencies in the Blood, that are *Heterogeneous* to the rest of the Mass; whence come Fevers, Frenzies, Convulsions, Madness, &c.

The Causes of the Suppression or Diminution of the *Lochia* are an Obstruction, or too great a Stoppage of the Uterus, which makes that the Blood, by reason of the squeezing of the Blood Vessels, or their being stopt up with thick Blood, can find no free Passage to flow through; as also Cold taken in Labour, by which the Orifices of the Vessels being now separated from the Placenta, and consequently

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quently open, are constipated and stop'd up, and as the coldness of the Body hinders this Flux, so likewise the various Passions of the Mind, as a Fright, Sadness, Sorrow may suppress and diminish the *Lochia*; because they retard the Motion of the Blood, and thicken its Mass: the Motion whereof is used to keep the Passages open, the cooling of the Feet and Legs, and cold Drink may have the same Effect, because the Cold and Nitrous Parts in those Cases penetrate to the Womb, and draw it together.

The *Diagnosis* of this Distemper is manifest of it self, for no Blood is voided after Labour, when this Flux is diminished, it is known by the little quantity of Blood voided, in respect to the Stature, Bulk, Temperament and Constitution of the Patient. For, as I hinted before, this Flux is not equally copious in all Child-bed Women; it may likewise be known by the Symptoms, which would not appear, if the Flux was not suppress'd or diminish'd: these Symptoms are a Swelling of the Belly, because of the Retention of the Humours, that ought to be voided, a difficulty of Breathing, for the same Reasons, whence follow the Midriff's being hindered in its going down, Convulsions, Frenzies, Faintings, Perturbations of the Eyes, and other things abovementioned.

The Prognosis wholly depends upon the attending Symptoms, the Strength and Constitution of the Patient, for if there be grievous Symptoms, the Patient be weaken'd by a hard Labour, or any other Cause, if She be of no Lively Temper, it is a bad Omen, which is not so, if these are absent.

The Cure of the Suppression of the *Lochia* consists wholly in the provoking of them to Flow: This effect have Emollient, and Purging Glysters often injected, they may be pretty Sharp, because they promote the Flux of the Humours toward the strait Gut, Rubbing of the Legs, dry Cupping applied to the Hips, Bleeding in the Ancle, sometimes likewise in the Arm, when the *Uterus* is stuff'd up with Blood; sharp Pessaries, before mentioned, Fumigations of Brandy, Wine that red-hot Bricks are thrown in, a Decoction of the Recrements of *Regulus Antimonij*, or of Aperient and Aromatick Roots and Herbs, a Fomentation of the Belly, with Emollient Herbs boil'd, adding the Roots of *Briony*, *Wild-Cowcumber*, *Birth-wort*, *Savin*. Inwardly prescribe opening and attenuating Medicines, order'd in the Cure of the Suppression of the *Menstrua*; Troches of *Myrrhe*, Dittany of *Crete*, *Saffron*, the Essence or Decoction of *Savin*, White-wine, Worm wood and Chalybear wine, Volatile Salts, Spirituous Waters, Cordial Confections, &c. Purging is to be administr'd in its due time.

#### NOTE.

' The Cure of the Suppression of the *Lochia* ought to vary, according to the various Symptoms and Distempers, that at-



tend it: for since a continual Fever, and *Inflammatory* Diseases most commonly follow upon this Suppression, take care, that striving to promote the Flux, and to open the Vessels of the *Uterus* you do not Augment the *Inflammation*, and Fever; which will happen, if without distinction you make use of all the hot Medicines, proposed by our Authors. But in this case repeated Bleeding, as well in the Arm, as the Ankle, and cupping Glasses applied to the Thighs, and Shins are all most sufficient Remedies by themselves, and if after the use of them the Patient mends not, there is little hope left. Inject besides, Cleansing, or partly Opening, partly Cooling, and Emollient Glysters of a Decoction of Mallows, Pellitory, Mercury; in the strain'd Liquor of which dissolve the Pulp of Cassia with a Dram of Nitre, and Sugar, and Honey.

Make use likewise inwardly of the Vulnerary Herbs about Geneva, of which is spoke in the Chapters of Spitting of Blood and elsewhere; and exhibit a Decoction or Infusion of them in Fair Water hot with Sugar twice, or three times a day; or let the same Herbs be boiled in Broth, and given the same way. In the mean time neglect not to order Fomentations of Emollient and opening Medicines, that are not sharp; nor let the Fumigations made o the same be omitted.

To the Emulsions of the Cold Seeds, Pine and Pistake Nuts, add some Kernels of Peaches: Lastly, let the Infusion of Jesuits Bark in Water, be given three or four times a day. Purging Parisanes, after the first days are past, are also of use here.

## C H A P. XXII.

### *Of the After-PAINS.*

**T**HOUGH the Pains, that are used to accompany and follow after Child-birth, are common to all Child-bed Women; so that none can shun those Pains, as being the Punishment pronounced to Child-bearing Women, for the Sin of our First Parents; and that in this Sense ceasing within two or three days they require not the helps of the Physician; yet it happens sometimes that these Pains are sharper, or last longer than usually, and then the Patient stands in need of the Physician. These Pains are in no other place than the *Uterus*, weakened by the Straining of their Labour, and in its internal Surface sore, and as it were excoriated by the separation and disjuction of the *Placenta* from the *Uterus*. The Causes of them are either the quantity of Blood remaining in the Relaxed *Uterus*, and distending its Membranes, or the Acrimony of the same Blood, or the Serum Yellicating and Pricking the Lacerated Part of the Womb, or Winds

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Winds elevated from Humours fermenting in its Subſtance, and together with the ſwelling Humours, tearing its Tunicks.

Theſe Pains are diſtinguiſh'd from others, that commonly iſeſt the Belly: Firſt, by the Child-birth, which is gone before, by being only in the Hypogaſtrick Region, by their being mitigated, when the *Lochia* flow, and exaſperated, when they are ſuppreſs'd, by raging before; and going off, after the *Lochia* are voided. That the exceſſive quantity of Blood cauſes the Diſtemper is known from the Diminution, or Suppreſſion of the *Lochia*, a Diſtenſion of the lower Belly, the grievous Symptoms following the Retention of the *Lochia*, from a ſharp and pricking Pain, the *Lochia* being too much diluted with Serum, the leſſer Suppreſſion of them, &c. you may gather the Acrimony of the Blood; but the Winds ſhall be known from a wandering Pain, ſhooting from one Part to another; all which Cauſes the cold Air received in the Womb may likewise occaſion.

As to the *Prognosis*: theſe Pains are very troubleſom, and tho' they are not always Mortal, yet they are not without Danger; eſpecially if a Suppreſſion of the *Lochia* attends them. To the Cure of them, when the quantity of Blood which fills and diſtends the *Uterus*, and ſuppreſſes or dimin iſhes the *Lochia* is the Cauſe, Bleeding in the Arms and Ankle is required; afterwards exhibit Medicines that open and provoke the Courſes; Fumigations, Emollient and warming Fomentations, and other things preſcribed in the Suppreſſion of the *Lochia*: where there is an Acrimony of the Blood, the Humours are to be mitigated by luke-warm Bathings, the Mucilage of the Seeds of *Pſyllium*, and Quinces in Purſlain Water, by Oyl of Sweet Almonds taken inwardly, or given in Glyſters, a ſweetning Diet, Milk, Whey, &c. with other things often mention'd in an Acrimony of the Humours. In the Winds *Hippocras* with Oyl of Sweet Almonds is proper, Carminant Glyſters, a Decoction of Flowers of Camomil, a Fumigation of Nutmeg, Saffron given in White Wine, and other things preſcribed in the Wind Cholick, not forgetting the *Univerſalia*, which may be ſafely adminiſtered, where there is an Indication for them, always with regard to the Strength. In reſpect of the Pains, from what Cauſe ſoever they proceed, Glyſters of Milk with the Yolks of Eggs are proper; ſo are likewise Narcoticks, as Laudanum, the Syrup of white Poppies, and Water-Lillies, a Fumigation of Brandy, a Decoction of the Recrements of the Regulus of Antimony, becauſe thoſe things are Sulphureous; preſcribe alſo Emollient Fomentations, adding Attenuating and Uterine Medicines. But Cataplaſms and Anoyntings are of no Efficacy: Let their Diet be Laudable and ſtrengthening, to retrieve the ſtrength impaired in their Labour.

#### N O T E.

\* The After-Pains are eaſ'd by Aromatick and Carminative Remedies; the Seeds of Cumin, Fennel, Aniſwed, Carway,

'Marjoram, Penny-Royal, Mother-Wort, Roman Camomil infused, or boiled in Wine or Water, the Germans in this case esteem Zedoary very much, from half a Dram, they give it to a Dram; the Spirit of Sal Armoniack, Aromatized and made bitter, or mix'd with Carminatives is also Beneficial here; the same may be said of the Hysterick Tinctures of Castor, Ginger, Cardamoms, Cammomil boyl'd in Sheeps Head Broth, dissolving in the strained Liquor a Dram of Venice Treacle, with two Ounces of Red Sugar-Candy, and the same quantity of the Oyl of Nuts by expression without Fire. They make likewise Cataplasms of Onyons boyl'd in Water, or roasted under the Ashes, adding Line-seeds and Cumin-seeds bruised with the Powder of Camomil, and Barley Flower; they also prepare Liniments of Oyl of Camomil, or the Essence of the same distill'd Oil of Spike, Amber, &c. There is another Cataplasim made of Powdered Bay-berries, with Marsh-mallow Roots, and a little Sweet Costus, adding to it the Grease of a Goose: If the Pain proceed from clotted Bood, they recommend half a Dram, or a Dram of *Sperma Ceti* in Broth, or Water of *Carduus Benedictus*; in the same Case, the Decoction of fresh gather'd Grass-Roots and Chervil, adding to it a very little Mace and Saffron.

'As to Opiates; they are to be used with caution, that the Flux of the *Lochia* be not suppress'd; but when there is an urgent occasion for them, they must be joyn'd with stimulating Remedies, such as are Aromatick, Carminative, Aperient, &c.

## CHAP. XXIII.

### *Of the Acute Distempers of Childbed-Women.*

**W**E only consider the *Acute Distempers of Childbed-Women*; because the time of Lying in is not so long, as to admit of *Chronick Distempers*, but well of *Acute ones*; which they are subject to; as *Continual Fevers*, as well *Essential*, that is such as first proceed from the Blood, as *Symptomatick*, or such as follow upon the *Internal Inflammations*, that often attend *Child-bed Women*, as also *Frenzies*, *Sleepy Distempers*, *Convulsions*, &c. There is likewise a particular kind of Fever, which invades almost all Women the third Day after Child-birth, and is call'd the *Milk-Fever*; because it is rais'd when the Breasts are swell'd with Milk; yet we must not believe that the Milk is the Cause of it; for the Milk can make no Fermentation in the Blood; but this Fever proceeds from some *Heterogeneous Particles* taken out of the Womb by the Circulation, and whilst the *Lochia* flow not, mix'd again after Child-Birth with the Mass of Blood, and causing an Effervescency in it; which is helpt by the Agitation of the Humours contracted in Labour;

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yet this Fever most commonly lasts for three or four Days, and being of the extended *Ephemerick* sort, requires no Cure, but ceases of it self. But the other *Acute* Distempers abovementioned, that infect Women in Child-bed, may be sufficiently understood from what has been said in their respective Chapters; for they differ not in their Nature, *Ætiology*, nor even in their Diagnosis, but their *Prognosis* and Cure are different; and this is the reason, why we treat of them here separately; as only in regard to Child-Bed Women. For tho' they might have the same Causes in Child-Bed Women, with those which we named, when we treated of them; yet they are more frequently, nay most always owing to the Diminution and Suppression of the *Lochia*, or the Immoderate flowing of the same; the Errors in Diet, especially now the Spirits and Humours are, agitated by what they suffer'd in Labour, when they Gorge themselves with more Victuals than they can digest; or to taking Cold in, or after their Labour, by which the Transpiration is hindered; another Cause of the Fever, and other *Acute* Distempers of Child-Bed Women, which is very frequent, is the Retention of the After-Burden, or part of it, which being retained in the *Uterus* Putrifies, and by its Corruption infects the Womb and Blood, whence several Distempers may arise. The same effect may also have the Coarctation of the Neck of the *Uterus* and *Vagina* suddenly after the Birth, occasion'd by too great a Distension and Pain; which is the Cause that the Blood in the Cavity of the *Uterus* is retained and clods, whence the aforesaid Distempers proceed, and these as well as their Causes, may be sufficiently known from what has been said before.

As to the *Prognosis*: These Distempers in Child-bed Women whose strength is impaired in their Labour, are much more dangerous than in others. It is a Question among the Ancients, Whether in the Distempers of Child-bed Women, the Computation of the days in expecting the *Crisis* must begin from the beginning of the Distemper, or immediately after Child-Birth? They say, that if it be a Natural Labour, and the *Lochia* flow well, the Computation must begin from the Invasion of the Distemper; but if it be a Preternatural Labour, and the After-burden or *Lochia* are retained, then they say the Birth is Distemper'd, and from thence the *Oeconomy* of the Body begins to be perverted. The same Computation they usually make in Wounds of the Head, tho' the Fever invaded the Patient not before the fourth or fifth day; but this Question at this time, where we expect no *Crisis*, nor take notice of critical days, is altogether Fruitless.

The Cure of *Acute* Distempers in Child-bed Women has regard to two sorts of Remedies; great ones, as *Bleeding*, *Diet*, *Purging*, &c. and little ones, *viz.* Alterating Remedies. As to the latter, because they are of less force, they may be the same that are given in other Distempers: But *Bleeding*, tho' there is a great Controversy about it, ought to be perform'd with cau-



tion; and if the Distemper invades them presently after they are brought to Bed, it must be done sparingly, because of the Weakness of the Patient; but if it comes some time after, it may be done more largely, or oftener repeated; because the Strength is then somewhat restored; likewise if the *Lochia* flow copiously, it must be done more sparingly, than when they are suppress'd, for then you may Bleed largely in the Foot, and repeat it; Regard must also be had of the greatness of the Distemper, the violence and burning of the Fever, &c. For in these Cases, *Phlebotomy* cannot be avoided; unless the Flux of the *Lochia*, and the Debility of the Patient forbid it, and it may be prescribed more or less, once or oftner, according to the weight of the Indications to the contrary. It is to be observed, in the mean time, that in these cases the Patient is to be Strengthen'd, that she may be able to bear the Bleeding, and that her Strength being much impaired already, She be not overcome by the Greatness of the Distemper; and this may be done by some Spoons-full, or Drops of Cordial Waters; or a little Confection of Alkermes, or of Hyacinth, &c. always in a small Dose, that they augment not the Distemper. Concerning the Diet: it must be spare, as has been said in the *Acute Distempers of Women with Child*, by Reason of the presence of the *Acute Distemper*; and, because, if it was more plentifull, the Food would not be well digested in the Stomach, and consequently would increase the Morbifick Matter; for impure Bodies the more they are fed, the more they are hurt, yet it must not be so Spare, that the Strength of the Patient is Diminished by it, nay it ought rather to be between plentifull, and Spare; and Broth should be often exhibited. What we have said of Bleeding holds likewise in Purging; which, if it is thought necessary, may be more safely, and somewhat more strongly performed, the longer it is after they are brought to Bed. Nay there are some Cases, where strong Purges cannot be avoided, viz. if there come Sleepy, or other grievous Distempers; for then it is better to try a doubtful Remedy, than none: When the *Lochia* are peccant in their Quality, or diminished in their quantity, you may Purge more freely, than when they flow naturally or immoderately; but unless grievous Distempers, that require strong Remedies urge you to it, let the Purges always be gentle. Glysters likewise may be of use here; because they stir the Humours not so much, and cleanse the first Passages; yet sharp ones are to be avoided, where the *Lochia* flow Immoderately, tho' in other Cases they may be of use.

In a word, from what has been said in the Chapter of the *Acute Distempers of Women with Child*, we may gather, what is to be done, to Women in Child-bed in the like Distempers.

#### N O T E.

\* The *Acute Diseases of Child-bed Women* are commonly very difficult to be Cured; because the Blood, which all

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the time of Child-bearing Circulates more slowly, and is consequently loaden with fixed, and gross *Salino-sulphureous* Particles, easily ferments, and lays down the se Particles on all the *Viscera*, and especially the *Uterus*; which Particles circulating but slowly themselves cause an Obstruction, Fever, and Inflammation; the more, if by reason of any Violence used in Labour, there happens to be with it even the slightest Dilaceration, or Divulsion of the *Uterus*, that directs the Course of the Blood, and Spirits thither. In which case the Fever of wounded People, which is never free from Danger, if the Wound has Penetrated to some noble Entrail; Secondly to Malignant Fevers, by Reason of a peculiar Putrefaction of the Humours, contracted, as I said before, from the Defect of Circulation.

This being supposed it is plain, that the Remedies commonly used in other Inflammations, as also Malignant Fevers are likewise proper here: Such are often repeated Bleeding, all *Alkalis*, Remedies that precipitate the Salt, and Sulphur, and hinder Putrefaction; Diaphoretick Antimony; Crabs Eyes the Corals, Harts-horn, Myrrhe, &c. But the Cure of the Symptoms of his Fever, as Loosnesses, Convulsive Motions, &c. is to be fetch'd from their proper Chapters.

## C H A P. XXIV.

### *Of an Ulcer of the W O M B.*

**T**HIS Ulcer; besides all those things, which it has common with other Ulcers of other Parts abovementioned, bred either of an Inflammation, or sharp Humours; has some different Causes, that are peculiar to it self, and not to other Ulcers; such are the Whites; Matter grown sharp by staying in the Womb; Venereal Venom running from a *Gonorrhoea* into the Cavity of the Womb, and by its Corrosive Power producing an Ulcer: An Ulcer of the Womb, like an Inflammation of the same, may be bred in various Parts of it; as the Bottom, the Neck, the lateral, fore, and hind Parts; which makes, that the Exulceration being afterwards continued to the Bladder, and Strait Gut, the Drink comes away by Stool, as well as by Urine; as sometimes it has been observed; besides as to their Magnitude, Figure, and Quality, some Ulcers are deep and large; others small and Superficial; others Fistulous, Inflamed, Scirrhus, Cancerous; all which Differences may be seen in the Surgeons, where they Treat of Ulcers.

The Signs of an Ulcer of the Womb are an Inflammation, and Abscess of the same gone before; a Pain, and biting in the Womb: the voiding sometimes of matter, and purulent Humours; when the Ulcer penetrates to the inward Cavity: Besides there is a little Fever, and by degrees a Consumption comes insensibly to it; this *Diagnosis* is more amply Illustrated.

if you examine the Causes, that are gone before ; if an *Ulcer* possesses the Neck of the *Womb*, it may be seen by the help of a *Speculum Matricis* or perceived by the Midwife ; or in Copulation it is manifested by the Pain : if an *Ulcer* be bred on the outward Surface of the *Uterus*, it shall be known by the absence of the aforesaid Signs ; and by that no matter is voided through the Privities ; nor that the injections in the *Uterus* make so great an Irritation ; there is a sort of Fluctuation felt in the Belly, viz. when the Matter flows outwardly ; and in a great Quantity. If the *Ulcer* be Simple, and Bening, Penetrating into the Cavity of the *Womb*, the Matter shall be White ; and neither Stinking, nor Copious ; but if it be Malignant, and Eating, the Matter shall be purulent, Green, Lived, or of various Colours ; and also Stinking : If the *Ulcer* be Venereal, it shall manifest it self by a Gonorrhœa, or the Signs of the *Pox* ; if it be Cancerous, the Pain shall be more Sharp, and Pricking ; nay there will be a greater Hardness, and Resistance in the lower Belly ; the *Prognosis* to be made in an *Ulcer* of the *Uterus*, can never be good, no more than in all other inward *Ulcers* ; nay *Ulcers* are more Difficult to be Cured in this than other Parts ; by reason of the abundance of bad Humours, that is used to be exonerated in the *Uterus* : Which makes, that the *Ulcer* is always fed by the serous Humours ; when to be Cured it ought to be kept Dry. The larger the *Ulcer* is, the more Dangerous it is ; likewise when it is Malignant, Eating, Fistulous. If it be in the Neck of the *Uterus*, or the inward Cavity of the Privy Parts, it is Cured more easily ; because Remedies, and Injections may be better brought hither, by the help of a Syringe.

The Cure of an *Ulcer* of the *Womb* ; besides the Universal and altering Remedies, which we have prescribed in other *Ulcers* of the Lungs, Liver, Kidneys, and Bladder, and for brevity's sake shall not repeat ; requires some peculiar Remedies to it self : especially, when the *Ulcer* is Internal ; such are injections of only Barley Water, or with the Addition of Sugar, and Honey ; or of Red Wine, a Vulnerary Decoction, Milk, or an Emulsion ; if the Pain rages much ; adding now and then Adstringent Remedies ; as the Juice of Plantain Leaves, Shepards Purse, Quinces, Turpentine ; Yolks of Eggs Dissolved in the Injections are very good to Cleanse the *Ulcer* : If it be Malignant, Fetid, and Putrifying, you may add to the injection the *Collyrium* of *Lanfrancus*, or a little *Ægyptiacum* : To dry the *Ulcer* make use of Adstringent Injections ; adding the Troches of Gordon, or Starched made without Lime. Fumigations may be likewise used of Frankincense, Mastick, Myrrh with a little Turpentine, or some Cinnabar ; or of the Recrements of Regulus of Antimony Boyld in Fair-water : The Drinking of Hot, and Cold Mineral Waters is likewise proper ; if the *Ulcer* be in the Neck of the *Uterus* Oynments, and Liniments may be applied

plied to it, as in other Internal *Ulcers*; afterwards make use of drying Powders, of Rurnt Allum, Ceruss, Tutty, Sarcocolla; if the *Ulcer* proceeds from the Pox, or follows upon a Gonorrhœa, the Fumigations of Cinnabar, and the aforesaid Injections are proper, Mercurius Dulcis frequently administred, Mercurial Pills, Sudorifick Decoctions, and other Remedies, that are commonly used in the Cure of the Pox, and Gonorrhœa.

## A TREATISE of the Distempers of the JOYNTS.

### *Of the G O U T.*

**T**HE *Gout* is a Distemper belonging to the *Joynts*; the *Barbarians* call it *Gutta*; others *Podagra*, taking the name from the Feet, which are often afflicted with this Distemper. It may be defined to be a Periodick, and now and then returning Pain, proceeding from a sharp Saline Humour, that falls upon the Parts near the *Joynts*, as Tendons, Ligaments, the Skins that cover the Bones, and is distinguished in many sorts; for when it affects many Joynts, at once, it is called Universal; and Particular, when it only Invades one Articulation; it is called *Chiragra* in the Hand, *Podagra* in the Foot; *Gonagra* in the Knee; *Ischiatick* Pain in the Hips; in the *Joynt* of the Jaw-bone it is called *Syaggonagra*; in the Neck *Trachelagra*; in the *Joynts* of the Back-bone *Rhachilagra*; in the Shoulder *Homogya*; in the Elbow *Pechagra*, &c. all which Species yet are comprehended in the general name of *Gout*. Which is either fixed, when it always afflicts the same Articulation; or flying, when the Pain Runs from one Articulation to another. Some sort of *Gout* returns quickly, and the other has long intervals; sometimes it is knotty, and breeds Stones, or Chalk in the *Joynts*; sometimes it is attended with an Inflammation, or at least Inflammatory Disposition; some *Gout* has a Slight, and some a greater Fever, that goes before, or follows it: Some is in-born, and contracted from our Darents by an Hereditary Disposition; an other sort is Adventitious, and proceeds from Errours in Diet, or the Abuse of the six unnatural things.

The nearest, and Joynd cause of the *Gout* can be nothing else, than serous or Lymphatick Humour, that is very Acid, that is Impregnated with an Acid Salt, that is very corrosive; and falling upon the Parts near the *Joynts*, by reason of their loose  
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Structure, vellicates, and pricks the same, as being Membranous, and consequently very sensible, whence follow those very intense Pains, that are used to afflict the Gouty.

This Humour, according as it flows to the *Joints* in a greater, or lesser Quantity, and is more, or less corrosive, so it causes more or less Violent Pains, and is attended sometimes with an Oedematous, sometimes an Inflammatory Swelling, with a Redness of the Part, and at last in tract of time, when it is grown Habitual, it breeds Stones, or Knots in the *Joints* which are owing to no other Humour, than a Lympha, which Copiously Invades those Parts, and is apt more, than any other Humours to tarry and congeal; chiefly assisted by an Acidity, that is predominant in it, as well as in the Blood; of the affected, or receiving Parts as the Membranes, Tendons, Skins that cover the Bones, and Ligaments there is no doubt, for the Bones are insensible; but well about the Parts whence the Humour flows; which the Ancients made several; the Brain the Liver, Womb, &c. but those things can't be allowed off in this time; as I have intimated several times. The Humours then, that produce the *Gout* can not proceed but from the whole Body; that is from the Blood, sent from the Heart by its Systole through the Arteries: that the Humours in this Distemper are Sharp, no Body can deny; for how would they else excite those Pains? but that this is chiefly to be imputed to the *Serum*, or Sympha at least, as being the Joyned Causes, is manifest from the serous Blood of Gouty People, that is diluted with *Serum*, in which Salts are dissolved; and to the composition of the affected Parts; which consisting of Membranes, Ligaments and Tendons, require for their Nourishment more Lympha, than other Parts, which must likewise be Sharp.

That the *Serum* or Lympha is peccant in Acidity rather, than any other Quality is proved, not only by the External Causes of the *Gout*, that can make the Acid abound in the Blood; but it is plain likewise from the Symptoms, as also the Remedies, that are given in the *Gout* to be named lower; which prove rather an Acidity, than any other Disposition of the Blood.

*Willis* Derives this Distemper from the Flux, and Effervescency of the Nervous Juice, and Blood, which he supposes to be *Heterogeneous*; hence come Distensions, and consequently Pain, and afterwards follows a *Precipitated Coagulum*, the *Tophi*, or Knots. But as this is merely Hypothetical, and destitute of solid Reasons, Studying to be short I shall not stand to confute it.

The External Causes of the *Gout* are Viscuals, that are gross, of a Difficult Concoction, Acid, Salt; Drunkenness, Immoderate Venery, Violent Exercise, an Idle life, much Sleep, Fear, Sadness, Cares; all which may make an exaltation of the Acid

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in the Blood and Serum; likewise those things, that can debilitate and Loosen the *Joints*; as a Contusion, Luxation, Straining, Refrigeration of the *Joint*. The Diagnosticks of this Distemper shew, some the present *Gout*, others foretell its coming: The Signs, that it is Imminent, are a very exquisite feeling in the *Joints*, which are hurt by the least Squeezing; there is commonly a Fever, as likewise a Numness, and a Stinging Pain. The Presence of it is known by Violent Pains, commonly attended by a Swelling, and Redness of the part; the great Toe is commonly invaded the first; and a Fever, if it be not come already is presently raised and lasts as long as the Pain. There are no Convulsions observed in this Distemper; because the *Joints* are only affected, and not the Muscles; besides the matter is not *Spasmodick*: The Pain is Periodical, and returns by Intervals; because the Humours, that now have flowed to the Parts, stuff them up, and after the Pain leave 'em as it were a Numness; by Reason, that in these Nervous Parts; the Passage of the Spirits is Shut; which at last being discuss'd, or drawn Back in the Vessels, the sensibility returns to the Parts; whence the Humours flowing a fresh, the Pain returns. Add that the Flux of the Humours upon the *Joints* proceeds from the Agitation of the Humours, which is periodically made. In consequence of which we may note, that upon Arthritick Pains, and the Flux of the sharp Humours upon the *Joints*, when often repeated, especially upon the Hip; sometimes a Luxation follows; which is made by a Relaxation of the Ligaments, that Joyn the Bones together: The Ancients thought, that all the Humours; as the Pituita, Gall, Melancholy, &c. could Cause the *Gout*, and therefore gave distinguishing Signs of it; but we, that allow but one Cause, shall spend no time about these Signs.

As to the *Prognosis* of the *Gout*; it is no Dangerous, but yet the most racking and the most obstinate Distemper of any; for it lasts commonly till Death, tho' it Preserves those it Invades from other Distempers, an Inveterate, and Hereditary *Gout* is more Difficult to be cured, than that, which is newly, and in Old Age contracted, that also, where *Tophi* breed in the *Joints*, is utterly Incurable, but that which Invades young People, before there are any *Tophi* bred, is more easily cured: Tho' it is hardly possible to eradicate the *Gout* quite, yet the Attacks of it may be retarded, and likewise lessen'd by due Remedies, and Diet.

The Cure of the *Gout* is performed by Remedies of several sorts; Bleeding, Purging with Potions, or Pills, rather Strong, than gentle; Vomits, if the Patient vomits with ease; Sweating by *Bagnio's*, sudorifick Decoctions of *Lentiscium*, *Antimony*, *Sassa Parill*, *Guajacum*, *Woolblade Root*, as also Fumigations for the whole Body of a Decoction of Dwarf Elder, Bay Leaves, Sage, Rosemary; or of Brandy; or the Decoction of the Recrements of the *Regulus* of Antimony, and of

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its Liver, or Hot Mineral Waters for Bathing: When the Pains are very Tormenting you must fly to Narcoticks; as Laudanum, Syrup of White Poppies, and Water Lillies: You must likewise prescribe things, that mitigate the Acrimony of the Humours, and Thicken the Blood such as Almonds, Rice, and their Preparations, Milk whey, avoiding all things, that are salt, acid and Tartarous, and Wine, and such as are Alkaline and Sulphureous, as Spirituous Liquors. Volatile and fixed Salts, especially, when the Fever abates, are very proper. Glysters are likewise frequently to be injected, made of an attenuating Decoction with Hiera Picra, Diaphenicon, and other Opiats, and Electuaries with Scammony, the Caryocostinum of *Bauderonius* eases much, and prevents the Distemper, the Pulp of Cassia is also recommended, Yolks of Eggs, and Broths made with them, Fat, and Sulphureous Food.

The outward Applications used here are of Various sorts, as Anodine, Repelling, Discussing, which are exhibited according to the various Indications: Those that are Anodine are Fomentations of Milk, Cataplasms of Emollient Herbs, and Roots with Crum of Bread, or of the Pulp of Cassia with Bean, and Barley Flower, Linseeds, &c. with Butter, Oyl, and Fat, of the Flowers of Camomil: And Narcoticks, as Henbane, Night Shade, House Leek, the Roots of Mandrakes, adding also *Laudanum*. Yet take care of using Emollient and Narcotick Remedies too often, for they Loosen the *Joints*.

The Repellent Applications, that hinder the Dissipation of the matter, and are always to be used in the beginning are, made of Astringent Cataplasms, or Fomentations of Wool Blade, Plantain Leaves, the Rind of Pomgranats, Cypress Nuts, the Roots of Bistort, and Tormentill, Roses: or of Oxycrat; or Limiments of Cerus, Litharge, Tutty, Salt of Lead, Calcitis, Vitriol, Maslick, Frankincense, &c. Resolving Applications are Cataplasms, Fomentations, Limiments; of Urine, Salt of Soot; Comphorated Spirit of Wine, Tobacco; Decoction of Leaves, and Flowers of Camomil in Brandy; the Antipodagrick Waters of *Rutlandus*, Quercetanus; of Sal Armoniack dissolved in Water; Oyl of Scorpions, of Wax; the Roots of Briony, Florentine Orris, the Dungs of Animals; of Pitch, Lye of Twigs: Plaisters are also used, as the Plaister *de vigo*, Dyachylon with Orris, Oxycroceum, &c. You shall find more Remedies, as well Internal, as External in the Authors, that either ease, or prevent the Distemper; which not to be too Tedious I Omit. Blisters are not approved off.

The Ischiatick Pain; which *Riverius* Treats of separately, belongs to the aforesaid Distemper; for it is a particular *Gout*, as well, as the Chiragra, Gonagra, &c. and consequently proceeds from the same Cause, and is to be cured by the same Remedies; and differs from the other species of the *Gout* in nothing, but only the Place affected.

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The Parts Affected in the Gout are, partly the Membranous Ligaments that fasten, and tie the Joynts together, partly the Periostium itself of the places near the Joynts: Tachenius Attributes the Efficient cause to a volatile Spirituous and of a sort by it self, or a peculiar Flavour, wedded to the Spirits, flowing into them Parts, which Acid first polluting the Synovia, and consequently Afflicting the Membranous Parts, of which I spoke just now, is the Author of the Arthritick Pains. By Synovia, which is a made word of Parcellus, the Chymists mean nothing else, but a Sweet, and Chylous Dew in its Natural state full of a temper'd Alkali, that as the immediate Nourishment of the Ligaments, Membranes, Tendons, and perhaps the Bones themselves, is an abundance gather'd between the Joynts; that besides it may like a kind of Grease Facilitate their Motion; upon this Synovia, I say the Acid works immediatly, and mixes itself with it, whence it becomes Acid it self, grows thick like the White of Eggs, and at last puts on a chalky Nature, and hence the Pains, chalk Stones, and other Arthritick Symptoms proceed.

The First Origin of this Dolorifick Acid is according to the same Author, to be look'd for in the Stomach, whose natural Ferment is Insensibly conquer'd by degrees by this Spirituous Acid; so that the Chyle, Blood, the whole Mass of Humours, and consequently the Synovia it self must necessarily Smell, and Taste of this Acid. What if we should to this Dew substitute the Lympha, leaking from the Glandules lately discover'd, which in this Case may as easily grow Sour, perhaps we should not be so wide of the mark. So much for the Causes of the Gout, which it is Sufficient to have touch'd.

As to the Cure, tho' it may seem, that it hardly ought to be undertaken, because it is a Distemper, that is call'd the Reproach of Physicians, yet that we must therefore not altogether Despair, is shewn by a very simple Remedy, that yet much excells all others, a Milk Diet, by which that this most stubborn Distemper may be conquer'd, and Rooted out, is witness'd by several late Experiments.

The Learned Greiselius and Walschmid having writ about this Diet, I shall say no more of it; but only in a word, that Milk in this Case must be all the Viſuals they eat; So that they must bid farewell to Meat, Herbs, and all other Viſuals whatever, and especially to Wine; and may once a day put some Bread in their Milk, and very seldom take a soft Egg, or two.

About the other Remedies, as Vomiting, Purging, Diuretics, Opiats, Anodines, Blisters, Bleeding, consult the Authors.



## Of a RHEUMATISM.

**T**HE *Rheumatism* is so nearly related to the *Gout*; that it would be useless to make a peculiar Description of it; for it is owing to the same Cause, and requires the same Remedies; some call it an *Universal Gout*, because the Pain invades not only the external, but likewise the Internal Parts; and consequently not only the *Joints*, but also the places between them, the Muscles, and their Membranes, the Skins that cover the Bones, in a word the whole Circumference of the Body.

Sometimes this Distemper is joyned by an Impotence as to Motion; which proceeds not so much from an Obstruction of the Nerves, as from the Violent Pain; for which the Muscles cannot contract themselves: It is also sometimes Universal, Raging equally in all the Parts; but at other times it is not so Universal, and only affects some Parts, or one Side; or Runs from one Side to the other, or from one Part to another, like the flying *Gout*. Note that their is a Remarkable difference between a *Rheum*, and a *Rheumatism*: For a *Rheum* is called a serous Humour, that falls upon the Wind-pipe, and Lungs; whilst a *Rheumatism* invades all, or several Parts of the Body, chiefly those that are distant from the Brain, and Causes a Violent Pain in them: Yet both Distempers are Species of Catarrhes: From what has been said the nature of a *Rheumatism*, and the difference of it from the several Species of the *Gout*, are sufficiently known; it remains now, that we proceed to the Causes, without examining with *Riverius*, whether it be a new Distemper, and unknown to the Ancients or not, since those Questions do very little to the Business.

The Cause of a *Rheumatism*; which, as I intimated before, is the same with that of the *Gout*, is a serous, saline, Acid Humour, more superfluously abounding in the Blood, than in the *Gout*; and by reason of its Copiousness, not only falling upon the *Joints*, but also upon all the Membranous, and sensible Parts of the Body, by help of the Arteries, that are dispersed throughout the Body: The truth of this appears by the Blood drawn from *Rheumatic* People, which is hardly any thing else, but *Serum*, with a small Quantity of Blood, that Coagulates in the middle of it, it appears also by the strength, which is less weakened by frequent Phlebotomy, than in other Distempers, because more *Serum*, than blood is drawn from them.

It is likewise Consonant to reason; for as much as the Parts affected change not of Colour, and there is no Swelling, the Pain is moveable, and runs easily from one Part to another; the Distemper is eased, and cured by Sweating; all which shews, that the Morbifick Matter is Thin, and subtle, and apt to extravasate, and run into the Parts; which can be nothing, but the *Serum*, and if it was not Salt, and sharp, it could not raise such Cutting, and Pricking Pains all the Body over: As for the Winds, which *Avicenna*, and with him *Riverius* think, that sometimes are the Cause of this Distemper; because the Pains run from one Part to another, as they do in a Wind Cholick: It is destitute of all probability; no Body can believe, that such a Quantity of Winds should be raised, as would be sufficient, to excite Pains, and Distensions throughout the Body; add that in the Solid and Membranous Part of the Members, and the Circumference of the Body, Winds can not so easily be raised, and gather'd for want of Room and Cavity: For they are always gathered in Cavities. Nor is it to be believed, that this serous Humour is sent from the Head, or Liver to other Parts, as the Ancients would have it; but the first Origin of the Distemper is, as we have already intimated, the Blood it self, much more serous than in the *Gout*; and likewise full of an Acid Salt; which Blood is carried to the Parts through the Arteries only, as we said before, and causes no Swelling, nor Dropsy; because the *Serum* extravasates only in a Small Quantity.

The *Diagnosis* of a *Rheumatism* is manifest enough from what has been said; the Rheumatick Pains differ also from the Venereal, in that the latter invade not so Universally all the Parts; neither are they so continual, but torment the Patient in the night only, and seldom in the day Time; moreover they hinder the Patients not so much from their Business; but the Rheumatick Pains confine them to their Beds; so that commonly they can hardly move themselves. This difference of the Pains is likewise made from the Causes, that are gone before; either making the Blood Serous and Salt; or Infecting it with a Venereal Venom: The other Symptoms of a *Rheumatism*, besides the violent Pains in all the Parts, are First a small Fever, which is commonly observed; caused

by the Racking Pains, agitating the Spirits, and consequently the Blood : Secondly the Conversion of the Blood, that is drawn from the Patient, into Serum ; Thirdly that Imbecillity, which remains after the Pains are gone, as it is in the Gout, because of the greater Thinness, and more easy Disposition of the Humour, that Causes the *Rheumatism*.

As to the *Prognosis* : This Distemper seldom, or never indangers Life ; but by its Obstinacy, and the Violence of the Pains is very troublesome : For sometimes it lasts for two, or three Months ; nay a Year, if it be without a Fever ; that which is attended with a Fever is commonly Shorter, and Sharper. Sweats, and plenty of Urine are good in this Distemper.

As for the Cure : This Distemper requires more Bleeding, than the Gout, because the Patient is not Weaken'd by it. Purgings is not to be used, but in the Declination : For otherwise it exasperates the Distemper ; the Purges must be made of Cassia, Senna, Diacarthamum, Manna. After the First Purge *Riverius* recommends Rosin of Jalap ; Purging Glysters may be injected every day, or every other day, dissolving in them Opiats with Scammony, or Emetick Wine, if the Pains be very raging, Sudorifick, Sulphureous, Narcotick Remedies, and those, that Mitigate the Acrimony of the Blood ; as Baths, Milk, Coral, and its Tincture, Diaphoretick Antimony, and other Alkaly's are here of great Virtue. So are likewise Fumigations for the whole Body, *Bagnio's*, &c. in a word all the Remedies, which we recommended in the Gout, are beneficial here.

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The Germans for the greatest part abstaining from Bleeding in the Cure of the *Rheumatism* make use chiefly of Sweating. It may be, that they being used to that Remedy, and leading the greatest part of their Lives in Stoves, have such a Disposition of the Pores, that the Superfluous Serum of the Blood, which is the material Cause of the *Rheumatism*, can easily be evacuated that way ; but the French, who Sweat not so easily, find only benefit by Bleeding in this Distemper : and Bleeding may here more frequently and copiously be performed ; because, as our Author observes, the Patients bear this Evacuation more easily in a *Rheumatism*, than any other Distemper.

Yet besides Bleeding it is proper to make use of Precipitating, and of Absorbing Alkalies, which in some People provoke Sweating : As Crabs-Eyes, Diaphoretick Antimony, in Red Poppy Water, &c. Anodine Remedies are likewise not to be Neglected of which the continual Pain of one or more Parts is a plain Indication : Lastly, gentle Purges are of use in the Course, or the Declination of the Distemper.

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T R E A T I S E  
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P L A G U E.

**T**HE very Name of Plague gives us an Idea of all what is dreadful to Mankind, as appears by its vulgar acceptation. For this word, which properly signifies the Distemper, of which we are now to treat, is commonly used to signify all the most pernicious things whatever, and not without reason. The Plague, for as much as it can be comprehended in one Description, is a very malignant, epidemick, contagious Distemper, most dreadful, and pernicious to Human-kind, that invades many at once, and rages sometimes over a whole Country, sometimes only in a City, or Town; by which many are kill'd, and from which few escape; weakning suddenly or very quickly all the Vital, and most commonly the animal Functions also; producing dreadful Symptoms; as spontaneous Weariness, and often terrible Vomitings, a Pain in the Stomack, a sudden loss of Strength, Palpitations of the Heart, Syncope's, or frequent Faintings, a Heat within the Breast, Drought, Head-achs, Watchings, a Frenzy, and often Convulsions at last: It is most commonly attended with a Fever, and Tumours besides of various sorts; as Boils, Carbuncles; accompanied with malignant Spots, and Pimples breaking out of the Skin.

Besides the said Symptoms with which (not always all at once, but sometimes with more, and sometimes with



fewer) the Plague is usually attended, there is hardly a Distemper that cannot be drawn in for its Companion, or is not often join'd with it: Wherefore the Plague variously complicated produces sometimes Quinsseys, sometimes Pleurisies, sometimes Loosnesses, *alias* Bloody-Fluxes, &c. that are pestilent: Which has made some Authors say, that the Plague was not one certain sort of Distemper, but that all Distempers might be equally pestilent, rage epidemically, and kill the greatest part of the People.

Some will allow no primary Cause of the Plague, but God only as the avenger of human wickedness: But tho' no body dares deny, but that this Distemper may be sent from Heaven to Mankind; yet considering that the Causes of the Plague may be, and commonly are merely natural, we ought here chiefly to examine them; for tho' it may proceed, as I said before, from a preternatural Cause, we need not have recourse to that, without the least necessity, when there are many Causes to be found, that are merely natural, from which its Origin may be deduced. Besides that others, tho' they own God for the Cause, deduce the Origin of Pestilent Distempers from a higher Cause than they ought, as from the malign Influx of the Stars, and the Conjunction of the Planets, *Jupiter, Saturn, &c.* but because this Influx is first of all explained by an occult Quality, it is plain, that it only consists in the Imagination of the Astrologers.

I shall examine then the less sublime Causes; and as they are of several Orders, so we shall set them down accordingly beginning from the immediate, or nearest; from which we shall more easily proceed to those, that are primary and more remote.

The nearest, and immediate Cause then, which produces the Plague in every individual Patient at the time that it rages, we say, is an extraordinary malignant Ferment, that is very active, and apt to change, and pervert the natural Constitution and Contexture of the Humours of the Mass of Blood. These Humours we call the primary Seat of the Plague, because all the grievous Symptoms above-mentioned, and tho' there were more, how many so ever attend the Plague, may be deduced from their Perversion, and Depravation.

tion. But because this perversion of the Humours, and consequently of the Spirits also, is able to bring all the Pestilent Symptomis, and even Death it self in a short time, we conceive it to be of two sorts; induced to it by reason, and experience acquired by the Signs, that appear in the various Species of the Plague. We say therefore, that the said perversion of the Humours, or pestiferous Disposition, may sometimes end in an intire (at least where it kills) Coagulation of the Humours; and at other times in as great a Dissolution of the same; according to the various nature of the Pestilent Ferment, from which the said alteration, and depravation of the Humours proceeds: whence it appears, that we must likewise admit two sorts of Ferments, or pestilent Venom corrupting the Humours; the one that, by reason of its intense Acidity, with which it is naturally endued, depraving the Humours its own way, exerts all its Power in coagulating the same; and the other, that by reason of its Alkaline and sharp nature perverting the Humours in its peculiar and contrary way, attempts, and brings about their Dissolution. According to the different Nature then of the pestilent Ferment, which, as I have said before, is sometimes acid, sometimes sharp, it is constant that the Plague may sometimes consist chiefly in a Coagulation of the Blood and Humours, and sometimes in a Dissolution of the same. The aforesaid Ferment then is the nearest and immediate Cause of the Plague; but because the Plague is a vulgar Disease, invading many at once, nay leaving few untouch'd, where it rages, it remains that we inquire, whence, and from what common Contagion those venomous Particles proceed, that attack the greatest part of the People of a whole City, or Country: Among the principal Causes and Contagions, that administer this fatal Ferment to Mankind, the Air, which, because of the unavoidable necessity of Respiration, we are all equally forced to draw in, is not without reason chiefly suspected; and this is thought, as it is often the Cause, according to its own faults and the disposition of the Bodies which it affects, of several epidemick Diseases, to be very frequently the Author of the Plague it self, and not without reason: Not, as the Ancients would have it, be-

cause it is peccant in the excess of its first Qualities; tho' I own, that such an excess may be the Cause, that occasionally concurs to the rise of the Plague; but because it is found loaden with the pestiferous Seeds, that is, with those very acid or very sharp Particles that constitute the aforesaid pestiferous Ferment, and consequently are indued with the Power of either quickly Coagulating or Dissolving our Humours; from which Particles, got by Inspiration or otherwise into the Body, the pestiferous Virtue is exerted. But again, since the Air contains not naturally these venomous Particles, it is to be inquired, whence they can, and are used to come at those times: Every body knows, that the Air, which we draw in, is not pure and only consisting of the Particles belonging to its natural Composition; because it is plain, that it is always loaden with various kinds of Exhalations, by the Heat of the Sun perpetually elevated from the Earth and Waters, or flowing from the Bodies by a Principle of Expiration which is in every one of them.

The Origin then of the said pestilent Quality, which is sometimes in the Air, cannot be deduced from any thing, but the aforesaid extraneous Particles or Exhalations, if they are malignant and venomous, that is, consisting of the aforesaid Acid, or very sharp Particles, occasionally breaking forth from the Bowels of the Earth, the Water, or other bodies somewhere putrifying, and dispersed through the Air: For as from the Exhalations, or Juices variously mixing together under ground, several Poisonous Minerals are bred, so there is no doubt, but the Exhalations, consisting of Arsenical, Antimonial, Mercurial, Sulphureous, and Saline Particles, each offending with the Malignity with which they are indued, may sometimes break forth above-ground, which dispersed through the Air make it pestilent; which chiefly happens, where the Earth gaping or opening too wide, gives occasion to the Eruption of some such poisonous Air, or exhalations from the Earth, or Waters, that have been long lock'd up and putrifying: And even on the Surface of the Earth, if there happen to lie many Carcasses and Corps, especially unburied, that putrifie, no doubt but the *Effluvia*, elevated from

from them, are able to infect the Air, and make it pestilent. In the same manner as the Air, whose use for the Respiration is common, is able to bring the Plague which is a very epidemick Distemper, so the common Diet is not only able to dispose People to the same, especially if it be infected with bad and venomous Particles, but it is thought that the Plague may likewise have its Origin from that Spring: For since it follows, that from the use of those Victuals bad Humours are bred within us, it seems not impossible at all, that they should acquire such a degree of Corruption, as to bring forth some Particles, indued with such a nature and Malignity, as are able to pervert, as it is usual in the Plague, the rest of the Humours; that is, according to their different nature, either to coagulate, or to dissolve them, and consequently produce a real Plague, and communicate it to others, and propagate the Pestilence. Since then this Generation of the Pestilent Ferment may be made of the common use of the Victuals that are infected, and the said Ferment may likewise be transferred to others; upon which perhaps, because they are of a better Constitution it has not that effect: It is evident that the Plague may arise from the common use of bad Victuals without any, or, at least, without any primary fault in the Air it self in some places, and therefore the Plague is very often observed in great scarcities of Provisions, Camps, long Sieges where bad Victuals are commonly used. That this Pestilent Ferment may be spread in us from a peculiar Corruption of the Humours, is likewise manifest from thence, that sometimes, in a City, when the Constitution of the Air cannot be suspected, and where the Food is not infected, some are taken with some infectious Distemper that has some, nay a great many Symptoms of the Plague, and differs from the real Plague only in the degree; for that in those People there is a Ferment bred producing those Distempers, can hardly be doubted, *viz.* from a peculiar Corruption made in them; which differs little from the Pestilent Ferment, and perhaps in nothing else but that many are not infected with it, because they are of a better Disposition of Humours; and I cannot see, why a more malignant Ferment than that might not be produced



duced and transferred by Contagion, especially where it proceeds from a common Cause and a common Corruption, and happens to invade many People at one and the same time.

From the common Drink likewise of corrupted, or with poisonous Particles infected Waters, as grievous Distempers, raging in many at once, have been produced, witness the Observations of Physicians; so I doubt not, but that a Plague may proceed from the same Cause; since in the Water pestiferous, as well, as other Particles may be hid; the Virtue of which Causes will be without doubt more efficacious to bring the Plague, if any bad Disposition of the Air concurs with them: But since we see, that sometimes the Plague is bred in many Places merely by being translated occasionally from other Places where it raged, by reason that some body travelled, or Goods infected with the Venom were brought thither from those other Places, without being before suspected of a venomous Constitution of the Air or the use of bad Food. It is certain, that to give the first rise to this Distemper in a Place, and make it spread over a whole City, or Country, it is sufficient, to have the Contagion come from elsewhere: and as that Venom was translated from one Region to another, by Persons or Goods infected; so being communicated to one, or more, it is from them again translated to others, and from those again by the same Contagion to others, further and further, till they infect the Air, and the Distemper is made common throughout the Place: And let no one think it impossible, that only some Particles of the pestilent Venom should infect a whole City, being by accident transferred thither; for so increase and spread most all venomous Ferments; if but an insensible part of them received alters and perverts the Humours, and makes them like themselves, it is sufficient to increase the Ferment, and infect many, nay afterwards innumerable others: So the least quantity of the Venom of a Mad-Dog, communicated to any one, suffices to alter and corrupt the Humours so much, that those that have received it are afterwards all over infected; and, being turn'd mad, might infect a whole City; and therefore it ought not to be thought strange,

that

that in like manner the pestilent Ferment, tho' first brought in a very little quantity, should afterwards by Contagion spread over a whole City or Country. This was the reason why the Bed, which *Alexandrinus Benedictus* says had been hid in a corner of the House Seven Years after the Plague, being brought forth excited the Plague again. The same may be said of the Leathern Clothes, and that Rope, of which *Trincavellius* makes mention, with which the Patients in time of the Plague had been carried about whilst alive, and when dead to their Graves; this Rope, after it had been hid twenty Years, being touch'd by a Servant, gave him a Pestilent Fever; by the occasion of which Contagion so many were afterwards infected, that Ten thousand People died of it.

These are the Causes of the Plague; which yet, when it rages, invades some sooner than others, according to the various Dispositions of People, and the Contexture of their Humours, by reason of which they resist the Operation of the pestilent Venom more or less, and receive with greater, or lesser facility the pestilent Corruption; wherefore to the easie getting of this Distemper help not a little a sickly Constitution, an ill mixture of the Humours, besides several Passions of the Mind; as the fear of it, sadness, &c.

The signs of the Plague are to be fetch'd from the above-mentioned Description; not believing, that all of them are observ'd in all Patients; but that in some many, in others few of them are always seen. Tho' these being well considered cannot of themselves be call'd Pathognomick signs of the Plague, because they are likewise observed in other, and especially Malignant Fevers, that are different from the Plague; yet the same, and especially the Boils, Carbuncles, and other such like swellings, at least at a time when many in a place are affected with the same Distemper, attended with the like Symptoms, and spread by Contagion, and when many die of it, are a most certain Indication of the Plague.

I am not of the Opinion of some, who think that the first that are taken with and die of this Distemper, were not really afflicted with the Plague, tho' it

could then not certainly be affirm'd ; how much soever I am perswaded to be of this Opinion by a Professor of this University, Monsieur *Chastelain*, whom I have formerly heard publickly defending it with great Zeal.

For it is not required, nor belonging to the *Ratio formalis* of the Plague, that we can know it certainly, or that many of it are taken with, and die of it ; otherwise a Man, left alone in a Desert Island, could never be affected with it ; but it suffices, that it naturally is such a Distemper, that is apt to spread, and kill many.

About the Fever likewise the Authors cannot agree, whether it essentially belongs to the Plague, and is its constant Companion. Which Controversie, if Reason did not, only Experience would end ; for it is manifest from the Relation of several Authors, that the Plague has been observed without a Fever more than once : And besides, since the Fever, when it attends the Plague, is a Symptom joined with all the rest, and separable from them all, why may these Symptoms not sometimes be found without a Fever, and yet the Distemper be the Plague ; since the aforesaid Symptoms, or at least the chief of them are not to be imputed to the Fever ; but rather to the Dissolution, or Coagulation of the Blood ; in either of which, as we said before, the *ratio formalis* of the Plague principally consists ; and the presence of the Fever is not to be counted necessary in the Plague ; because the said Coagulation, or Dissolution of the Blood proceeds from the Pestilent Ferment by way of Fermentation ; and that consequently a Fever, which consists in a preternatural Fermentation, must of necessity be produced from thence ; for tho' it is own'd, that from thence a Fever is raised, that is only sensible at one certain time of the Distemper, and not lasting throughout its Course ; yet it follows not, that this must perpetually accompany the Plague ; which is not strange, because we know, that there are many other venomous Ferments, that are able to pervert the whole Mass of Blood, without any sensible preternatural Effervescency, in which only the Fever consists ; neither is it hard to conceive, that the Pestilent Ferment, as being endued with the highest Activity, should either by Coagulating,  
or

or Dissolving be able to pervert the Contexture of the Humours so easily and so suddenly, as to do it without any Strife, or Fermentation with the Blood, but what is insensible, and without any increase of Heat; in which Case no body can say that there is a Fever. That the rest of the Symptoms accompany the Plague is no wonder, since, as we said, it consists in a perverse and totally corrupt Disposition of the Humours, which by the pestilent Ferment is so altered, and its Particles, which should naturally cohere together, are so disjointed and separated, that it is resolved to the Principles which compose it: And who sees not how great and many disorders must arise from thence, till Death in a short time ends them? Wherefore I think it worth the while, to touch upon some of the principal Symptoms, from which, when explain'd, the reason of the rest, which for brevities sake I shall omit, may easily be deduced.

These Symptoms we shall divide chiefly in four Classes, by reason of the four Species of Parts, in which they shew themselves: For some are used to infest the Natural Parts, some the Vital, others the Animal, and a fourth sort the Cutaneous Parts, or the Surface of the Body. Those of the first Class, attacking the Parts contained in the Abdomen, are chiefly the Pain in the Stomack, Vomiting, Loosness, &c. The Pains of the Stomack and Vomiting proceed from the bad Humours, by the force of the Pestilent Ferment, parted from the other Particles, with which they cohered, and rushing with part of the said Ferment out of the Orifices of the Arteries into the Caviry and Tunicks of the Stomack: These Humours, according to the variety of their nature, sometimes shoot themselves into the sensible Parts of the Stomack, and cause violent Pains, and sometimes they penetrate through its Muscular Fibres, and assaulting the Spirits, lodged in them, make convulsive Contractions in the said Fibres, in which Vomiting consists: The Loosness is without doubt occasion'd by the same Humours flowing into the Guts; and then they are either derived from the Liver, Bladder or Gall, which may be known by the Bilious Excrements; or from the *Pancreas*, if they savour of the acid, and melancholly Humour of the



the Ancients ; through the ducts of those Parts. The principal Symptoms that infect the Vital Parts, disturb the motion of the Heart, and are Syncope, Faintings, slight Palpitations, or unequal Pulsations, &c. beginning with a low Pulse ; which is always observed, whether there be a Coagulation or Dissolution ; because the Blood furnishes the Brain with very few Spirits in either state, and consequently the Brain can send but few Spirits to the Heart for its Motion : To all this comes that the *elastick copula*, required to contract the Muscular Fibres of the Heart, is weak, as being made by the same Blood ; whence it must follow, that the Heart is but weakly contracted, and the Arteries, into which but little Blood, which besides is unfit for Rarefaction, is weakly thrust ; beat but weakly likewise.

The Motion of the Heart is unequal ; partly because the Spirits flow from the Brain sometimes in a greater, and sometimes in a lesser quantity into its Fibres ; partly because the Blood enters the Heart sometimes more, and sometimes less depraved, and rob'd of its active Particles ; whence the explosive Ferment of the Spirits, which is made of it, is sometimes weaker, and sometimes stronger. The *Syncope* is produced, as often as the flowing of the Spirits into the Fibres of the Heart is for a time interrupted ; such at least as is required to perform the sensible Motion of the Heart ; or when the Blood very spiritless, and utterly destitute of its explosive Particles arrives in its Ventricles ; for thence follows, that, when the Muscular Fibres of the Heart cannot be contracted after their usual manner, the Blood must stagnate in its Ventricles, and cannot be thrust to the extream Parts. The Causes of fainting differ from those of a Syncope only in the degree.

But the Palpitation either proceeds from the vitiated explosion of the Spirits with the Blood, by reason of the encountering of the *heterogeneous* Particles ; or the Blood's being coagulated, and clodded ; or its being excessively dissolved ; for the clodded, and thick Blood, since it shuts up its own passage from the Ventricles, and cannot altogether be thrown out by one Systole, jumps back against the sides ; and hence come its violent quaverings, the dissolved and thin Blood, unequally remaining  
within

within the Ventracles of the Heart, can likewise not all at once be thrown out, whence for the same reason it strikes the sides of the Heart, in which the Palpitation consists.

The Symptoms hindering the animal Functions, are chiefly Deliriums, Frenzie's, convulsive Motions of the Members, &c. all which are produced from a disorderly motion of the Spirits within the Brain; or a preternatural explosion of the same, made with the Elastick Particles in the Muscles of the external Parts. The disorderly Motion of the Spirits, that happens in the Brain, which is the Author of the Delirium, or Frenzy, proceeds from the *heterogeneous* Particles, that together with the Spirits are separated in the Brain, by means of its Glandules, from the Blood, when its Principles keep their former Coherence no longer; which *heterogeneous* Particles disorder the Spirits: who as they vary in their nature, cause Watchings, a simple Delirium, or a Frenzy; but if the Spirits make an Effervescency with those *heterogeneous* Particles in the Nervous Canals, and are translated from thence to the Muscles, Cramps or Convulsive Motions shall arise: Which may happen likewise, if immediately from the Blood an *elastick copula* comes to the Spirits, lodging in the Fibres of the Muscles; with which *copula* when they enter, they are provoked to make violent Contractions of the Muscles.

As to the Surface of the Body and the Pimples, Carbuncles, and other Tumours and Spots of the same kind, breaking out in the Skin; all those eruptions of Tumours, tho' of various sorts, are produced from a Portion of the Blood, and Pestilent Ferment, that is extravasated and lodged under the Skin. These Portions of the Blood are separated, and retire from the rest, when by the Pestilent Ferment either dissolved, or congeled to clods, they can keep no longer their Coherence with the rest, nor their usual Aptitude of circulating with the same; whence, according to the peculiar combination of these Particles, are produced sometimes Bubo's, if they lodge in the Glandules, where they cause an Inflammation, sometimes Wheals and Pimples, red or blackish Spots, and sometimes Carbuncles.

No Distemper has a more dangerous, or uncertain *Prognosis*, than the Plague: For this is the only one, whose Character it is to kill the greatest part, and which

which is chiefly known by the multitudes, it destroys; besides there is no good foretold here, as in other Distempers, by the Remission, and Benignity of the Symptoms; for it is used to send great numbers to the Grave; yet some Conjecture may be made of Recovery, if the Tumours break out suddenly, and in no dangerous Places; and if after their Eruption the Symptoms remit; otherwise great danger is threatned; as if the disturbance of the Mind perseveres; if there be perpetual Watchings, and Convulsions; if the Patient has Palpitations, or faints often; for all these, and other bad Symptoms are used to portend Death here.

Physicians usually encounter with the Plague, as it is imminent, as well as where it is present; for those, that are afflicted with it require a Cure; and others, that have yet escaped, want to be preserved: whence in time of the Plague the Indication for the Cure against so cruel an Enemy is two-fold; the one for Preserving, the other for Restoring the People; the first has either regard to the whole Common-wealth, or some particular People; as to the Preservation of the Common-wealth, it is usual, when one or more are infected, to advertise the Magistrates, who order the Infected to be carried out of the City with all his or their infected or suspected Moveables, to some convenient Place; and the House to be cleared of the Pestilent Contagion: How this is done, and the Cautions to be used may be seen in *Sennertus* and others; but if the Plague be about, and the Contagion is publickly spread, it is the safest way for every one to fly for it, and leave the Place if they can. But because every one's Circumstances allow not of this, there ought to be other means used to preserve those that stay. Such are chiefly Alexipharmack Remedies, that as they oppose the present, so they are likewise used to prevent the imminent Plague, with the same Efficacy; As Venice-Treacle, Mithridate, Confection of Alkermes, Treacle-Water, Antipestilential Extracts, of which there are many Prescriptions to be found in the Authors; the Pestilential Elixir of *Crollius*, and innumerable more Remedies of this sort, whose Descriptions may be seen in *Sennertus*; all which, if the Patient has also an ill mixture of Humours, may be

be preceded by a Purge ; and he must be kept free from all Excrementitious Humours, and Putrefaction : to purge then where it is needful, make use of what they call the Pestilential Pills, and other Remedies prepared likewise with Alexipharmacks ; to which must be added a strict Diet of Food that has good Juices, and is of an easie Digestion ; shunning all bad Victuals, that may easily putrisie : Garlick and Onions, tho' they are counted to be of bad Juices, have yet the name of being excellent Antidotes ; wherefore they must be used both with dry and liquid Victuals, yet with moderation. Convenient Pouders, and Electuaries made of Alexipharmack Remedies, are likewise to be used with Victuals. As for the other things that belong to Diet ; as Motion, Rest, Sleep, Watching, Venery, and the Passions of the Mind ; Mediocrity is to be kept in all ; and the Air infected with the Pestilent Contagion is chiefly to be shunn'd, or corrected as much as possible ; no Commerce is to be had with those that are infected, and the suspected Places are to be purged by lighting of Fires.

As to the Cure of the Plague it self, it wholly depends upon the knowledge of the Indications : for where there is a Dissolution of the Humours it requires other Remedies, than where there is a Coagulation of the same : besides about Bleeding there is a great dispute among the Authors, some of which are for it, and others altogether against it. But since it is utterly useles to hinder the Corruption of the Humours which is in the Plague, and weakens the Strength which ought here chiefly to be preserved ; and that those, which forbid Bleeding, argue from Experience, which chiefly ought to decide those Controversies ; for all the Authors that have made diligent Observations of the Plague, tell us, that more of those recovered that had not bled, than of those that had : Wherefore siding with Experience, and weighty Authority, I think it better often to omit bleeding, than to order it ; especially when the Physician is not called in the beginning of the Distemper, and the Patient is not Plethorick ; when it is not attended with a great Fever, and there is a Dissolution of the Blood. But if the Physician be called in the beginning, when the Strength is yet intire, and the Patient is Plethorick,



thorick or Feverish ; and it is to be fear'd, that the Distemper may fly to the Brain, or some other principal Part, then a Vein is to be opened ; which may be done boldly, yet with due regard to the Nature and Strength of the Patient ; for by it you will prevent the imminent Dangers just now mention'd, refrain the Fever, and procure more room for the Blood, to continue its Circulation in.

There is no less Controversie among the Authors about Purging : To be short, I am of Opinion that sometimes a Purge may be prescribed, but in the beginning of the Distemper, and where the Plague invades a Body that is full of bad Juices ; or when it seems to proceed from, or to have been occasioned by an inward Corruption of the Humours : but if there be no manifest Signs of the Corruption of the Humours, and the Distemper is only owing to the natural Contagion, Purging seems to be useless. By all what has been said about Bleeding and Purging must be understood, that, whether they are convenient or not, in the first place you must make use of Remedies that oppose and exclude the Pestilent Venom ; and the Cure is to begin with Alexipharmicks ; which are all most of the same sort of those prescribed in the Preservatory Indication ; yet in exhibiting these and other altering Remedies, which are very beneficial in this tho' very acute Distemper, great regard ought to be had to the primary Indication, whether there be a Dissolution or a Coagulation of the Blood : where there are Signs of a Dissolution of the Blood, hot Alexipharmacks likewise may be given, principally in the state of the Distemper ; but when the Blood is not much dissolved yet, you may order things that are apt to expel the Pestilent Venom through the Skin ; as the Powder and Salt of Vipers, *Lapis Bezoar*, *Bezoar Mineral*, &c. the taking of Alexipharmacks ought to be intermix'd with things that are able to cool the Blood, and by their Coagulating Virtue to preserve it from Dissolution : To this end Cordial, and withal cooling, Juleps and Portions ought to be order'd of Sorrel, Plantain, and other Waters, with the Juice of Citrons, Pomgranates, &c. But if the Pestilent Ferment be of the opposite Nature, and seems

seems to corrupt the Mass of Humours chiefly by Coagulation, chuse the hottest Alterating, and Alexipharmack Remedies, consisting of Volatile Salts, and those that are chiefly endued with a dissolving Virtue; and let them be frequently used; such are the aforesaid Pouder, and Salt of Vipers, Bezoar Mineral, Venice-Treacle, Mithridate, Treacle-Water, Elixir *Proprietatis*, or the same prepared with an acid Spirit; Coral, Pearl, and the like, that are able to promote the Expulsion, or the Coagulation of the Humours: Lastly care is also to be taken of Symptoms, the Bubo's, Carbuncles, &c. all which require a peculiar Cure. But if I should separately set down those Cures, it would too much lengthen this Treatise, when besides they belong to Surgery.

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A  
TREATISE  
OF  
FEVERS.

**S**ince in all Fevers of what nature soever the Mass of Blood is in a Ferment, so that in this Age it goes no more under the notion of a Preternatural Heat kindled in the Heart, and from thence by the Arteries dispersed thro' the whole Body, but is called a Fermentation, or a Fermentative and Intestine motion of the Parts of the Blood; I have thought it would not be amiss before we proceed to the Nature, Differences, Causes, &c. of Fevers to say something of Fermentation in general, the Knowledge of which will much Elucidate our Treatise. The name of Fermentation is derived from Ferment, which is very frequently the Cause, or rather Occasion of it, or from Fervency, or a Heat, which fermenting Bodies very often conceive. This Name formerly was only given to Compositions, that from the addition of a Ferment, or its being mixed with them, swell'd and acquired an inward Motion in their Parts; as in Dough, or likewise in Beer, and some Juices that are Spirituous, or Winy, or yield an ardent Spirit by Distillation, that without the Mixture of any other Body, of themselves are used to make an Agitation or Motion in their Parts; as Cider and other Liquors, squeez'd out of Fruits and Plants that abound with Spirits; but now the Name of Fermentation is become more common, and the Modern Physicians use it not only, in speaking of Dough, Wine, Beer,

Beer, &c. but they extend it to many other things ; so that there is almost no motion, at least of things that are moist, among the Vegetables, Minerals, or Animals, but what is call'd a Fermentation ; which I think is done with a great deal of reason ; because there is a very great Similitude and Analogy between the motion of the Humours, or Juices contained in the Plants, Animals, and even the Earth it self, with that of Dough, new Wine, Beer, &c. which usually they have when they ferment.

But to come to the Humours, contained in our Bodies, or the Mass of Blood, which is the chief matter of our Discourse ; there is no Man in his Wits, that dares deny, that the Heat, that is call'd natural, which is in us, and likewise other Animals, proceeds from the Circular, and chiefly the Fermentative Motion of the Blood, throughout the Body ; without which the Principles, that compose the Blood, which are various and many, could not be kept mix'd together, and would separate from one another ; as we see by the Blood drawn out of the Body ; and since Heat, according to several Philosophers, proceeds from the motion of the Particles of all hot Bodies, and moreover the fermenting Bodies, especially those that are Oily, Spirituous, and Sulphureous, grow always hot ; it is plain that the hot Blood of Animals, which is heated more or less, according as it is more or less agitated, and moved in its *constitutive* Parts, must be obliged for its Heat to no other Cause, than the greater, or lesser Fermentation raised in it, or the mutual strife of its Particles, and Principles. Which is greater, the more, as in Dough, new Wine, Beer, &c. the Particles are various, heterogeneous, and disproportioned in regard of one another, disposing the said Bodies to a Fermentation ; so the Blood consists likewise of diverse Principles ; as by Chymical separation appears ; and it is composed of Spirits, Salt, Sulphurs, Water, Earth, all which being parts of many and diverse Figures are able to produce the same effect in it.

But before we proceed any further we shall explain the nature of this Fermentation, and, that we may not obscure rather, than Elucidate this Treatise, give a De-



finition of the same, conceiving it to be an Intestine, and Expansive Motion of Heterogeneous and mutually disproportionate Parts in a convenient Humid, and a free space, made without a sensible Cause, that is, without a Cause, that sensibly is added to it; with a change of the Whole, or the Parts, that is with a total or particular change, or alteration of the fermented Body. This Definition seems to be the most exact that can be given; as shall appear by the separate Explication of all the Words. First it is call'd an Intestine, and Expansive Motion: As to the Motion it is most commonly perceived in the fermenting Body; as it is in Dough, new Wine, &c. Sometimes it is insensible; viz. when the Fermentation is less, and moderate: and then with our Reason we may sufficiently gather it from the heat, and other alterations, that happen to fermenting Bodies; and in this it agrees with many other Motions, that are not Fermentative; as for example, the motion of Water, Wine, or Dough, agitated by our hands; such as the Motion of flowing Rivers, &c. Then it is call'd Intestine, and Expansive, because it is rais'd in the Center, and as it were in the Bowels of the Body; and that the inward parts of it, which are moved, seem to tend from the Centre to the Circumference; and lastly, because the fermented Body is always blown up, and swell'd; which is not observed in the other Motions of Liquids; we add, that the Fermentation is a motion of Heterogeneous and mutually disproportionate parts; that it may be understood, that it is not every Heterogeneity of the Parts, that is required to make a Fermentation; but only such a one, as is attended likewise with a great disproportion, and irregularity between the Particles, or that yields an easie entrance, and a difficult egress to the *materia subtilis*, or Æthereal Matter; for otherwise all Liquors, whose parts are many, of divers Figures, and in motion might be said to be in a ferment, which is false; and this is the reason, why all things, that are of similar parts, that is, of the same Figure and Formation, remain in the same state; but when the one are mix'd with the other; as Spirit of Wine, with Spirit of Turpentine; Oil of Virriol, with Oil of Tartar, they presently ferment.

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There is added besides, in a convenient Humid ; because Fermentation belongs properly to Liquids, or, at least, to Bodies, that have some Humidity ; for tho' Venice-Treacle, Dough, and other thick Bodies, seem not to be liquid, yet they are not so dry ; but they have liquidity enough, to be call'd moist ; by reason of which they may ferment, swell, and by the motion in their parts be blown up ; from whence may be gathered ; that hard and dry things are not fit for Fermentation, as appears by experience ; because their parts are more strictly united together, and in too much rest, to be able of making a distributive motion within themselves, like soft and humid things ; in which the Union of the Particles is very loose. There is added also, in a free Space ; because it is almost impossible, that a Fermentative motion should be rais'd, where there is not room enough for the Inflation, and Turgescency of the fermenting Body ; for where there is a Rarefaction of a Body, and an Ingress of new Matter, as there is in all those that ferment, the Extension must of necessity be augmented ; and consequently there is more Room, and a free space required : this is the reason why Casks, that are fill'd too much with new Wine and shut close burst asunder ; hence it is, that Earthen and Glass Vessels are broke, if they are stopt close, when they are too full of violently fermenting Liquors ; and lastly hence it is, that the Blood Vessels are most commonly broke, especially in a *Plethora*, if the sides of the Vessel are so strong, that they can resist the force of the fermenting Body ; in that case the Fermentation is slowly perform'd, or ceases. It is said also in the Definition, that the Fermentation is made without a cause sensibly added ; to distinguish it from burning, and boiling ; for boiling Water, and burning Wood cannot properly be said to ferment, no more than Liquors agitated by the Wind ; because these Motions have sensible Causes, the Fire and Air, whose arrival moves and agitates the aforesaid Bodies ; Lastly it must be with a Change of the whole, or the parts ; that is, with a total, or particular change or alteration ; because the end of Fermentation is to change the fermenting Body to another, which is either impure and perfect, as it is in the Generation and Cor-

ruption of things, in which a new Compound is said to be produced, indued with a new Form; because most all the parts get from the Fermentation a new Site, a new Figure, and a new Order: or it is particular and imperfect; because the fermenting Body is not so disorder'd, or rob'd of its Figure, by the motion of the Fermentation, as sensibly to take a new Form; then it is only said to be alter'd, and not to be generated, or corrupted. Having thus explain'd the nature of Fermentation, I shall proceed to its Differences; and first as to greater or lesser Motion rais'd in the fermenting Body, the one is call'd an Effervescency; when the Particles of the Body are so violently agitated, that their motion, and tumult are both heard and seen, and the Bodies are puff'd up like boiling Water, emit Smoak and Vapours, and most commonly conceive a very great Heat. Of this kind of Fermentation Chymistry furnishes us with many Examples; partly in the mixture of various Liquors, and Spirits, that are contrary to each other; as Spirit of Vitriol with Oil of Tartar, Spirit of Turpentine with Spirit of Wine; in a word all Acids with Alkalies: partly in the Dissolution of Stones, and Metals; which by themselves, as being hard and solid, cannot, as I said before, ferment; yet when Corrosive and Acid Liquors are poured upon them, by reason of the disproportion, between the surface of the Stone, and Metal, and the parts of the Liquor, immediately applied to it, their Particles are so shaken, that they are forced to separate one from the other; till the whole body, which is to be dissolv'd, is divided in very small parts; which lodg'd in the Pores of the Liquor, and made more proportionate to it, make an end of the Effervescency. The other Species of Fermentative Motion, contrary to an Effervescency, which retains the general name, and is call'd a Fermentation, is that, in which there is not so great a motion of the agitated Particles of the Bodies, nor so great an Exhalation of Vapours and Smoak; neither is the Heat so intense; such a Fermentation there is in Dough, new Wine, Beer, and many other things, that ferment more gently.

It differs likewise, as to the subjects, in which it is raised; the one is called a natural Fermentation, and this is perform'd without the help of Art, or the hand of the Artist, but the whole work is absolv'd by Nature; as you may see in the Juices of the Vegetables, in the production of the Minerals in the Bowels of the Earth; in the Blood, and Humours of the Animals, in order to Nutrition, Generation, keeping up of the natural Heat, &c. The other Species is Artificial, which is only raised in those things, which are prepared by Art; especially when contraries are mix'd together, and active are applied to passive Parts; as we see in Chymical Experiments, and Preparations. Again one Species of Natural Fermentation is call'd *Perfective*; when the Compound arrives to a more perfect State by it; and the other *Corruptive*; when it changes for the worst by it: But truly, since the Generation of one thing is the Corruption of another, this Division is of no great moment; no more than abundance of accidental ones, that may be made; according to the time it lasts, or the subjects it belongs to, Minerals, Vegetables, or Animals.

As to the Causes of Fermentation, there are many and various Opinions about them. Some think, that the fermentative Motion is raised from within, without any cause from without; and deduce it from the Spirits, or the most active and subtle Principle of the Body; for as much as they study their escape, and strive to fly away by their Mobility and Agility; which they cannot perform, but by stirring and agitating the thicker Particles; by which they are intangled, more or less, according to the greater or lesser quantity of the Spirits. Those, that call the Fire, Air, Water, and Earth the first Elements of Bodies, alledge some Particles of Fire, hid in the Compound, as the cause of Fermentation; and of these they reason no otherwise than the Chymists of the Spirits; and many of them think, that those Bodies, which we call Alkalies, when they are reverberated by fire and heat, contain a very great quantity of those fiery Particles, as it were imprison'd within their Pores; which on the least opportunity of an escape, are by their Volatility elevated with a very great force.



force. Thus they say the tumult is raised, when Water is thrown upon Lime: thus acid Liquors poured upon Metals, Stony, and other calcined Bodies excite a Fermentative motion. Others assign two causes of Fermentation: viz. an Acid, and an Alkali; from whose mutual action and conflict the Fermentative Motion is made; and they think, that there is nothing in nature, but what is Acid, or Alkali: The argument of which Hypothesis they have taken from the Artificial Effervescencies usual in Chymistry, in consequence of a mixture of some Acid with Alkaline Bodies; That Body they call Acid, which is endued with long and sharp-pointed Particles; and is apt strongly to strike the Tongue, and to be deeply insinuated into it; as Juice of Lemons, Spirits of Vitriol, Nitre, &c. An Alkali they call a Body, that calcined by Heat or Fire; by reason of the frequent passage of the fiery Particles through its substance, is made altogether Porous, and consequently very fit to swallow an Acid, as being sharp-pointed; yet not without a foregoing Fermentation and tumult, which they fancy to proceed from the Motion of the Acid; whose Particles, in penetrating the substance of the Alkaline Body, like so many Wedges, divide the Parts of the Body, with which they encounter; till at last, either the Acid is intangled in the Pores of the Alkali, and loses its Motion; or the Alkali is totally dissolved. Others, whose Opinion I here embrace, searching things more thoroughly, and inquiring into them more like Philosophers than Physicians, that is to say, very rationally, think, that the Motion of Fermenting Bodies, tho' it is raised from within, that is from the Parts, that constitute the Body, is yet really adventitious; that is, first excited from a Cause, that came from without; which Cause is nothing else, than the *materia subtilis*, or the Ethereal Matter, so called by the Philosophers of our Age; the Existence of which they prove by many Reasons and Experiments; and this endued by God with an unmeasurable swiftness; which, as it were, is essential to it, filling and penetrating the Pores of all Bodies, is alledged as the only Cause of all Sublunary Motions, and consequently of Fermentation; which it produces, as it finds an easy and open Entrance

Entrance into the Bodies, or their Pores, and a difficult Egress; for then, whilst by its Mobility, joined with the smallness of its Parts, it copiously penetrates, and passes all Bodies whatever, it breaks and overthrows the thick resisting Particles, that would retard it: hence follows the Turgescency of the Body, which is greater or lesser, according to the greater, or lesser quantity of Ethereal Matter entering the Body; or the greater or lesser resistance of the Particles that strive against it; this Turgescency continues, till the Ethereal Matter has made the Passages easie every where, and its Egress as free as its Entrance; for where it finds an easie passage it neither breaks nor agitates the Parts, but the Body remains quiet, and in Peace; as we may observe, not only in the Bodies that Ferment not; but likewise in those that have suffer'd the greatest Effervescencies.

The occasional and disposing Cause, which prepares and disposes the Bodies to this copious and extraordinary Entrance of the Ethereal Matter, is the aforementioned irregularity, immiscibility, disproportion, &c. of the Particles; by which, since they cannot easily be applied and adapted to, and united with one another, the ways for the Ethereal Matter are made wider, and consequently it enters more copiously; wherefore all Ferments make the Bodies, with which they are mix'd, ferment only for as much, as in their Parts they have a Figure disproportionate to the Body that is to be fermented; for so much the Chymical Liquors, poured to, and mixed with one another, are only agitated, as they have Particles of different and contrary Figures, and for so much conceive the Acids with Alkalies a Fermentation, or Effervescency, as the Principles of either differ in Figure from one another, and have not that Form, by which without tumult they can be tied and cohere together; in a word, wherever there is a sufficient Heterogeneity of the Parts, that are to be mix'd and joined together, there for the reason already mention'd a Turgescency must arise: and hence it is, that in all Fermentations of the Blood, the Heterogeneous Particles are always accused.

This last Hypothesis, which adscribes the whole Work of Fermentation to the *Æthereal Matter*, as the first,

Principal, and Efficient Cause, seems to be the best of all, and is now received by the better sort of Physicians; because no Bodies whatever, what Spirits, and fiery Particles soever they are filled with, and what Acid, and Alkaly so ever they contain, can ever of themselves or by the addition of a Ferment, or by being mix'd one with the other, acquire a greater Motion, than they have within themselves: for it is a constant Law of Motion, that all Bodies remain in the same State in which they are placed, till they are removed from it by some Agent from without; how is it to be thought then, that a Ferment which has no sensible Motion, mix'd with Dough, Beer, &c. which likewise have no Motion; should make a greater Motion in the Parts of the said Bodies, and produce a more Intense Heat, as it happens in things that are in an Effervescency? How shall Spirit of Vitriol, poured to Oil of Tartar, Water upon Lime, all which separately are in no sensible Motion, raise a tumultuous Effervescency? How shall an Acid meeting with an Alkaly, get a greater Motion, than it had before? How shall the Particles of Fire, imprisoned in the Pores of calcined Bodies, and consequently less agitated, be brought again to their violent Motion? And lastly how shall Spirits, before intangled and without Motion when the Body Ferments, be disintangled and acquire Motion? It is certain, that by reason of the mentioned Law of Motion received among Philosophers, it cannot be conceived, unless some mighty moveable, and agitated Matter comes to it from without, such as is the *Æthereal Matter*; which, according to the various Disposition of the fermenting Bodies, or the Configuration of the Parts, and the Opening of the Pores, rushes into them sometimes in greater and sometimes in lesser quantity; and penetrating the Parts thrusts them every way, sometimes tumultuously, and sometimes gently, and with less violence: but when we assign the *Æthereal Matter*, as the principal and primary Cause of the Fermentative Motion, we exclude not the other various and helping Causes from it; such as the Elastic Particles of the Air, which most commonly entering into the Pores of the Bodies, now made wider by the entrance and motion of *Æthereal Matter*;

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by their elastick force contribute not a little to the divulsion and separation of the Parts, and commonly elevate the fermenting Bodies to bubbles. Such are likewise the thin and subtle Particles of the Spirits; which, with their great Motion, which they easily conceive, (it being communicated to them by the Æthereal Matter, which is yet much thinner) assist the said Æthereal Matter in this Operation, and render the performance of it more quick and easie. The effect, or end of Fermentation is, as I intimated before, by variously agitating, separating and attenuating the Parts of the Body, in which it is raised, to reduce them as it were to the same nature, and make them proportionate to each other, that they may cohere; yet so, that the Æthereal Matter may every way have a free passage through them; and either drive the thick and most resisting Particles by Precipitation to the bottom; or, if the ways are open throw them out, or by an expansive Motion push them to the Surface of the Fermenting Body. The truth of this is evident in new Wine Fermenting in Casks; neither do we deny, by admitting the Æthereal Matter for the Cause of Fermentation, the great Efficacy of the Acid and Alkaly, in promoting the Fermentative Motion, when they are applied to, or mix'd with one another; the more because we know a *Posteriori*, viz. by many Experiments that are made in Chymistry, that, when they meet together, they always swell up and ferment. But before we explain in what this Efficacy consists, and how from the Explication of these two Bodies, the Motion of an Effervescency arises; it is necessary to observe, that the Names of Acid and Alkaly are not commonly given to things that are absolutely, but only respectively so; for if the Acids and Alkalies which are of various sorts were absolutely so, no Fermentation would be raised between them; because in this Case nothing would be an Alkaly, and between many other Liquors, which neither of them are Acid, as between Spirit of Turpentine, and Spirits of Wine and Urine, there would be no Turgescency, which yet is false: For among the Acids there are many that are Heterogeneous, and that mix'd together ferment; there are likewise many other Sulphureous or  
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Sharp Liquors, which mix'd together conceive a Fermentation; and many other Bodies, that to the taste are neither Acids nor Alkalies, when put together do the same, as we may see in *De Graaf*, which is a great Argument, that Acids and Alkalies are only to be call'd so, in respect of the other Bodies, with which they are used to ferment: So Water, tho' we find it not Acid, may yet be call'd so, in respect of unslack'd Lime and other Calcin'd Bodies; Spirit of Wine in respect of Spirit of Urine, because they act the part of Acids; and when two different Acid Liquors ferment together, the one which acts the Part of an Alkaly, may be call'd so in respect of the other, and so it is with the rest. For all Bodies that are used to ferment together, tho' by the taste they are not Acid nor Alkaline, have yet the same mutual Disposition, Site and Order of Parts, the same Configuration of Pores as real Acids and Alkalies, that is, as Spirit of Vitriol, and Spirit of Salt of Tartar have when they are mix'd together; whence it is no wonder, if they Ferment in the same manner. In a word, all Bodies that undergo a Fermentation or Effervescency, do it, as is said before by the Disproportion and *Heterogeneity* of their Parts; wherefore since innumerable Bodies may be so in respect of many others, we ought to conclude that when Acids and Alkalies mix'd ferment, as also all other Bodies whatever, it always proceeds from the often repeated *Heterogeneity* of their Parts; which in the afore-said manner permits the more, or less tumultuous entrance of the *Æthereal Matter*. Hence must be fetch'd likewise the very great Disposition which the Acids and Alkalies have to Ferment together; and that since they may in their pointed Particles have many and different Figures, they are likewise various and of various Figures, as we said before; for some have Cylindrick Parts, others Triangular, Quadrangular, Pyramidal, &c. in some the Points are very thin, in others they are more obtruse; in some of the form of a Needle, in others like a Sting: and this is the Reason, why their Action is always Respective; for Spirits of Vitriol, Sulphur, Salt, Nitre, *Aqua Regia*, Distill'd Vinegar, the Juice of Lemons, the Juice of Barberies, &c. tho' they

they agree in being Acid, yet by reason of the various Configuration of their Parts, they have various Effects: some of them dissolve Silver, Iron, Copper; others Gold: some ferment with some peculiar Bodies, and some with others; some dissolve Lead, others not; some precipitate the Bodies dissolved by Salt or sharp Liquors, others not; Lastly some dissolve Earth, Shells, &c. the reason of which depends upon the variety of Figures in their Parts, which cannot equally enter, and penetrate the said Bodies, as having different Pores.

What we have said of Acids must likewise be said of Alkalies, which are divided in many Species: some are dry; as all those that are calcined, Stones, Shells, Earths, Metals, Coral, Pearl, fix'd and Volatile Salts, &c. others are Liquid, which properly are nothing but Volatile and fix'd Salts, dissolved in some waterish Humour; as appears by the Oil of Tartar and other fix'd Salts made by melting of them; as for the Spirits of Urine, Soot, Harts-Horn, Sal-Armoniack and other Volatile Spirits, they are likewise nothing else but Volatile Salts dissolved; the Alkalies are also, either Salt, as all Volatile and Lixivious Salts, or Compound and Corporal; as Stones, Earth, Coral, &c. and we must not think, which by the Bye I shall observe here, that all Liquors of Compound Bodies that ferment together do it by reason of an Acid, or Alkalick Salt which they contain, as some would have it, as being intangled and not yet at its own disposal; but rather by reason of their Principles, the Disproportion and Irregularity of which is sufficient to promote the Copious entrance of Æthereal Matter in the aforesaid manner: Besides the Alkalies differ also, and are divided in other Species, by reason of the difference of their Pores, of which they are full; for as the Essence of Acids consists in the Length, Sharpness and Hardness of their Parts; so the Nature of the Alkalies consists in their being Porous, and having abundance of Passages, that are sometimes Oblong, sometimes Triangular, Sexangular, Square, &c. according to the variety of which the Species of Alkalies are various and apt to Imbibe various Acids, viz. such as are proportioned to their holes, and fit to be received in their Pores.

Speaking

Speaking of the Fermentation, we must not pass by, how sometimes, tho' seldom, no Heat at all is produced in a Body tho' strongly fermenting; as for example it happens in the Fermentation of Coral with distilled Vinegar, tho' they make a great tumult; the reason of which in my Opinion is, that in either Body there are but few Sulphureous Particles if any, whose Motion helps commonly very much to produce a Heat in any Body whatever; as is manifest from the Effervescency of Oily and Sulphureous Bodies, which are accompanied with a violent Heat; as also from the Fermentation of those that abound not with so much Sulphur, in which much less Heat is perceived; or if you would rather explain this *Phenomenon* the Cartesian way, you may say, that the Parts of the Vinegar and Coral in the Dissolution of the Coral are moved, it is true; but not with that kind of Motion, which is call'd *Vorticofus*, and required to produce Heat.

It is likewise observable in the Fermentation of most Juices, Liquors, or other Bodies; that, when they are mix'd together, after the Conflict, and the Motion of Fermentation or Effervescency caused by their Heterogeneity, there is sometimes a very strict Union made between the Parts of the different Bodies, without any Precipitation; as from Spirit of Vitriol poured upon Salt of Tartar, and this is called a *Salsum*; which is produced from the mixture of both, and is of several kinds, as we said of the Acids and Alkalies; according to the various predominancy of the Acid, or the Alkaly, and the various mixture of the different Acids, or Alkalies; whence Allum, Vitriol, Nitre, Sal-Gemmae, Sea-Salt, Sal-Armoniack, Vitriolated Tartar are not said to be of the same but of diverse kinds: Sometimes there is not made so strict a Union after the Effervescency of the mix'd Bodies, but an absconding of the Parts of the dissolved Body in the dissolving Liquor, likewise without any Precipitation; as it is seen in Gold dissolved in *Aqua Regia*; the dissolution of Mercury, Silver; where the Liquors contain the Metals in their Bosom without losing their Transparency, by reason of the smallness of the said Particles, that little or not at all hinder the passage of the Light; and that

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join'd together are heavy enough to sink to the bottom ; yet separated and divided in very small Particles, are lighter and hindred from sinking ; not only by the Motion of the Liquor, keeping them in a continual Agitation ; but also by the pointed Particles of the same, shot into the Pores of the Metallick Parts, and holding them as it were in a hanging posture.

Lastly after the said Effervescency sometimes follows a Precipitation ; which, tho' it accompanies not all Fermentations, yet cannot be made, unless either a Sensible or Insensible Fermentation is gone before ; and this happens either because the gross Parts of the mix'd Bodies, which could not easily be united with the other, are thrown down by the Motion of the Fermentation ; or because by their own Weight they are separated from the thin ones, and go to the bottom ; or lastly because from the Conjunction of various Bodies grosser Particles arise ; as when Spirit of Urine is mix'd with Spirit of Wine, after a violent Effervescency there is a Curd made which *Precipitates*. This happens most commonly in the same manner in the mixture and confusion of other Liquors. But besides this Precipitation, which happens of it self, after the Mixture and Effervescency of various or contrary Bodies or Liquors ; there is also another Species of it which is not at all Spontaneous, and never follows after the Fermentation, or Solution of the Bodies ; unless a new Liquor, which occasions the Precipitation is poured to it. But this Liquor which is to be added, is not to be always of one and the same Nature ; but different, according to the variety of the Liquors mix'd, the dissolved Bodies, and the dissolving *Menstruum's*: So Oil of Tartar, or Spirit of Sal-Armoniack, *Precipitates* Gold dissolved by *Aqua Regia* ; Salt-Water, Mercury dissolved by Spirit of Nitre ; Oil of Tartar likewise *Precipitates* Lead, and Coral dissolved in distill'd Vinegar : Fair Water *Precipitates* Flower of Brimstone dissolved in Water impregnated with Salt of Tartar, and Jalap dissolved in Spirit of Wine ; and so it is with many other things, that being dissolved by their proper *Menstruums* want various and different Liquors, or Bodies, that pour'd in or added to the *Solution*, promote the Precipitation of the dissolv'd Body.

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Yet it is to be observed, that one Liquor, or one Body makes not the Precipitation in certain once dissolved Bodies; but Two, Three, Four, &c. because, tho' they are not absolutely so, yet they have that proportion in their Parts, as is more or less able to perform the same.

It is observable likewise, that Bodies dissolved in Alkalies are chiefly precipitated by Acids, and those that are dissolved in Acids, require Alkalies for their Precipitation; but how and by what Mechanicks these Precipitations of various Bodies are made by the addition of different Liquors to them, is explain'd after different ways. Some think that what is poured to the *Solutions* or the mixtures of the dissolving and dissolved Bodies, adds new weight to the dissolved Bodies, by which they descend to the bottom: others say, that the Particles of the dissolved Bodies, that were kept suspended by the Particles of the dissolving *Menstruums*, drove into the Pores of the said Bodies only superficially, and consequently easily separable, are forced down by the violence of the Liquor put to them: This they prove chiefly with the example of Acids, that are used to dissolve Metals or solid Bodies; the sharp pointed Particles of which are, here and there, only slightly and superficially thrust into the very small Particles of the dissolv'd Metal; so that the latter in the Substance of the *Menstruum* are kept suspended by the former, and afterwards precipitated to the bottom, when a new Liquor or Body is poured to them: *viz.* by the breaking of the Union between the dissolving and dissolved Particles, by the violence of the Body falling in the *Solution*; that is the points of the Acid Particles, that were thrust in the Pores of the Metallick and dissolved Body being broke: And this they say is the reason, why the precipitated Bodies, especially those, that were dissolved by Acids retain some Acidity, and must be wash'd several times before they can be edulcorated; for since they have within their Pores, as I said before, the Points of the Acids, they must of necessity have an Acidity that flows from the said Points, and be in a manner Corrosive, which is taken off by the Washing; because these pointed Particles being easily dissoluble in Water,  
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are sweeten'd by the great quantity of the Vehicle: This is likewise their Reason, why a very Acid and Corrosive Menstruum, the Metal being Precipitated after the Dissolution has for the greatest part lost its Acidity and Corrosive Virtue; so that it is no more fit to dissolve other Bodies, because, as I said before, the small points of its Particles being broke, they are grown blunter, and consequently unfit to penetrate solid Bodies.

Lastly, there is another Opinion about the Precipitation of dissolved Bodies occasioned by a Liquor poured to them; that affirms, that the once dissolved Parts of the several Bodies, because they are left at liberty, fall down by their own weight; whilst the Acid or Alkaline Particles of the *Menstruum*, according to the Nature of the Body, meet that which is newly poured to it; with which they are more disposed to be united, and hence they derive the Virtue of the Alkaline precipitated Bodies dissolved by Acids, and that of Acid precipitated Bodies dissolved by Alkalies: Yet this disposition which the *Menstruums* have of leaving the dissolved Bodies, and meeting the Liquors newly poured to them is by others otherwise explain'd; and these argue from the Laws of Motion, for all Bodies are the more apt to be moved, the less resistance they find, or the greater facility they have of going; wherefore it is no wonder, that Acids agitated by the addition of an Alkaline Humour, should leave the Parts of the Metal to go to the Alkaline Liquor, and the reverse: For they find the way easier and less resistance in going toward the Liquor poured to them: to this Explication I think may be added the Operation of the *Æthereal Matter*; which, having a free passage through the once made Dissolution, when afterwards a new Liquor is poured to it, finds the passage in the Surface of the Dissolution more ample, and entring in greater quantity than before, throws the resisting Parts of the dissolved Bodies to the bottom.

Having said thus much of Fermentation, and its Effects in general, we ought now to proceed to the particular Fermentations, and those that are chiefly observed; in the Minerals, Vegetables and Animals;

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may even in the Meteors, and to consider the various Changes, Alterations, Generations and Corruptions occasioned by them. But because the Fever, which is a Species of Fermentation, may be sufficiently understood by and gathered from what has been said of Fermentation in general; and that those things which may seem wanting here, may be found explain'd at large in *Willis* and others, that have treated of this Matter as their chief purpose; I shall hasten only to that kind of Fermentation, or Effervescency, which the Physicians call a Fever, and is the chief and only object of this Treatise.

To enter presently into some knowledge of it, and to make a Description of the Fever, we must with the better sort of Physicians define it to be: A disorderly and expansive, yet Permanent Motion of the Circulating Humours, or the Mass of Blood, and an immoderate Effervescency of the same, altering and accelerating the Pulse beyond the natural state, and raising an extraordinary Heat, either in the whole Body, or its principal Parts. To the perfect understanding of which Definition we must remember, what has been said in the beginning of this Treatise, *viz.* that the Blood in our Body really Ferments and Circulates, in which two Motions the Natural Heat and Life consist; this Fermentation is call'd agreeable to Nature, as long as it is moderate, according to every Age, and assisting the Functions, that mediately, or immediately depend upon it; or to speak more plainly, as long as the composing Principles of the Blood, which are various and different, are in their moderate Heterogeneity, gently moved by a kind and not violent entrance of the Æthereal Matter, remaining exactly mix'd and confus'd together; contributing to this also the Circular Motion of the said Blood, made by the Heart, which with its Systole pulseth it forward, and communicates the nourishment as well as warmth to the whole Body; for there is no doubt, but that the Blood consists, as well as other Bodies, of various Parts, that are of different Natures and different Figures; as Spirituous, very Nimble and Subtle, Sulphureous, or Biliou, Salino-Volatile, or fix'd, Waterish and Serous, and lastly Tartarous, or Earthly;

Earthly; which, as they are variously combin'd, or variously predominant, produce various dispositions of the Blood, or diverse Constitutions of Temperaments, if they are in a natural State, or various differences of Distempers, if they be preternaturally constituted. That the Blood has this variety of Parts is not only proved by the separation of it, which shews all the said Principles in the same; but also by Reason and Experience; for the Saltness found in the *Serum*, Spittle, and Urine demonstrates that there are Salts in the Blood; the Yellow Gall, as the Sulphur, which continually is filtered through the substance of the Liver, and in most Bodies inflammable, shews that there are Sulphureous Particles; the Animal Spirits, of whose existence no body doubts, filtered through the *Cortex* of the Brain, argue the presence of the thin, nimble, and spirituous Matter, from which they are produced; the Urine, Sweat, Tears, and the very Liquidity of the Blood signify that there is Water, or *Phlegma*. Lastly its thickness, or Coagulation, when it is drawn out, as also the Stones bred of it within the Body prove, that there are earthly Particles in the Blood: In a word, since we all consist of what we are nourish'd by; the Spirituous, Sulphureous, Salt, Waterish and Earthly Aliments, which we take, cannot but produce a Chyle consisting of the same, tho' less gross Principles, whence afterward the Blood is made, consisting of the same Particles. Besides the Chyle, which continually arrives to the Blood to repair its losses, consisting it self of different Particles, sufficiently disproportionate to the Mass of Blood; as also the Lympha, which when it is strain'd through the Glandules, is carried back to the Blood, and so full of Acids, that it kills Quick-Silver; help not a little to foment and conserve the natural Fermentation in the Humours of the human Body: The Chyle, as it is not, as I intimated just now, totally *Homogeneous* to the Blood, in which it is poured by degrees and drippingly in the *Vena Subclavia*; whilst it is circulated with it through the Heart and Blood Vessels, by reason of its irregular and disproportioned Parts and their Heterogeneity, raises a Fermentation in the Mass, by which it is changed to Blood, and its White and Milky colour into Red, when



the said Chyle, which is Sulphureous and Fat, is dissolved by the sharp Salt of the Blood. But the Lympha, as being full of Acids, is contrary to the Alkaline Gall which always lodges in the Blood, and is to it, as an Acid to an Alkaly, and consequently fit to produce the same effects or a Fermentative Motion. And how much the Chyle mix'd with the Mass of Blood is apt to augment and promote its Fermentation, is chiefly manifest from the Heat of the Body and the Pulse, which are heighten'd about two or three Hours after Meals, which is the time when the Distribution of the Chyle and its Intillation from the Milky Veins, its own Receptacle, and the Thoracick duct into the Blood is made. But this Fermentation of the Blood, which is called Natural, and proceeds from the mutual conflict of the various Principles of the Blood, and the mutual encounter of the Particles of different Nature, as well of the Blood as the Chyle and Lympha, is not a little help'd, as it is in all other Fermenting Bodies, by the Predominancy of the Spirituous and Sulphureous Parts, as being more disposed to Motion, when once moved by the entrance of the *Æthereal* Matter: they are very serviceable, as we said about Fermentation in general, to Agitate, Attenuate, and subtilize the other grosser Parts; and this is the reason, why the Blood that is thin, lively and full of Spirits, or thin Sulphur, such as there is in hot Temperaments, is much more fermented, than where the *Phlegma*, Earth, and passive have the Predominancy over the active Principles, and too much either intangle or dilute the same: hence it is likewise, that in Fevers the Exaltation of the Sulphureous Particles of the Blood is always accused, because they are more apt to creat Heat in the Body than any other. That Fermentation then is called Natural, and belonging to Health, that for Reasons sufficiently related is even and moderate; and it is call'd Preternatural and distemper'd, not only when it is slow and too little; whence proceed all cold Distempers, Obstructions, Cachexy, Greensickness, Melancholy, &c. but likewise, when it is perform'd too violently with too great an Agitation of the composing Parts of the Blood: whence all sorts of Fevers must be deduced; so that the Febrile Ferment-

Fermentation differs no otherwise from the Natural than in the degree; and both are owing to the same Causes only more or less violent.

Being come back again to the Fever, I shall proceed to a separate Examination of all the Words that compose the Definition of it: First it is call'd a disorderly and expansive Motion of the Humours, because this Preternatural Motion is truly Fermentative, having every thing the same with other Fermentations of Humours or Bodies, and so far it is general; in the Definition it is added, that it is a Permanent Motion, that is, lasting at least a Day or more, to distinguish it from that great Motion of the Blood, which is made by running, or any other violent Exercise, which are commonly followed by a Heat of the Body and Sweating: for this Heat and Agitation of the Blood is not Febrile and distemper'd; because to be of the nature of a Distemper, Pathology requires that it remains in the Body and not suddenly ceases. There is said also, that it alters and accelerates the Pulse beyond its natural state; and this is confirm'd by daily Experience by which we find, that there is no Fever where the Pulse is not more frequent, and commonly also otherwise alter'd; as when it is higher, more elevated, unequal, intermittent, the reason of which is drawn from the alteration of the Blood's Constitution by the immoderate Fermentation, the Dissolution and Attenuation of its Particles, as also from the increased Motion of the Animal Spirits; all which contribute much to quicken the Systole of the Heart; for the Blood and Animal Spirits are the true Causes of the Contraction of the Heart, as well as other Muscles. Lastly it is affirm'd in the Definition, that it raises an extraordinary Heat, either in the whole Body or its principal Parts; because that in this general Definition all Fevers, of what kind so ever might be comprehended, in which the whole Body grows hot, and especially the *Lipiræ* or Aguish Fevers; in which, tho' the Heat increases about the Heart, and the great Vessels, there is likewise a sense of Cold, and shaking in the Surface of the Body and the Extremities; which often proceeds from the sweating through of the Saline Serum, that by gently pricking the Membranes of the Muscles, produces the

Sense of Cold: The last Words are likewise added to the Definition, to distinguish the Febrile state from many other Constitutions of the Body, in which the Pulse is quick, and that are yet not Febrile; as in a Green-Sickness, Cachexy, and in dying People; in which the Heart beats more frequently, because it is only slightly contracted, by reason of a fault in the Spirits and Blood, and so runs a shorter space. I shall spend no time in examining the Definition, which the Ancients gave of a Fever, who said it was a Preternatural Heat, first kindled in the Heart, and from thence through the Arteries dispersed all the Body over; it is sufficient to say that it is not Exact, proper, clear, &c: nay that it explains more the Effects than the nature of a Fever, or that which ought first to be consider'd in it; Secondly the Ancients have err'd in thinking, that a Fever was only a Distemper, for as much as it was communicated to the Heart, as being a truly living Part, for they believed that the Blood was not alive nor a Part of the Body; the falsity of which is known even to the new beginners in Physick.

After the Definition of the Fever, which we have given, we need not doubt of its proper and immediate Subject, which can be nothing else than the Mass of Blood it self, or the Humours circulating in the Blood-Vessels capable of Fermentation; whence we may gather how much the Ancients err'd, that made the seat of the *Febris ephemera* or Fever of one Day, in the Spirits of the Blood only; which, the rest of the Mass being unalter'd cannot conceive a preternatural Heat. Neither is it possible that the solid Parts should have a primary Heat, and communicate it to the Humours and the Blood; because the Natural, as well as preternatural Heat depend upon the two Motions of the Blood, the Circular and Fermentative.

The Moderns as well as Ancients have always differ'd much in the division of the Fevers, which is multifarious.

Some divide them in continual and Intermittent; others in Diary, Putrid, and Hectick; others again in Putrid, not Putrid, and Pestilent; and others make other Divisions, which may be seen in the Authors:

But

But I shall keep to the most simple Method, and divide the Fevers, First in Essential and Symptomack. An Essential Fever is whose Cause is principally contained in the Blood, and depends not upon any other Distemper, or affected part of the Body: A Symptomack Fever is so call'd, because it is the Symptom of another Distemper, and its Cause proceeds not principally from the Blood, but is owing to some other part principally affected, and thence communicated to the Blood.

Of the first sort are Ardent, Malignant, Continual and Intermitting Fevers, in which the Blood preternaturally Ferments from a Cause bred within its Mass.

But the Fevers which attend the Inflammations and Ulcers of the Parts, are of the second sort; because the Effluvia that are Heterogeneous to the Blood, and from the Ulcer communicated to its circulating Mass, raise it to a Preternatural Motion; and therefore these Fevers must not be call'd Primary or Essential, but Secondary and Symptomack. The Essential Fevers, whose Primary Cause is in the Blood, and not borrowed from any affected Part, are again divided in continual and intermitting. A continual Fever is call'd that, which from the first Invasion leaves the Patient not, before the Morbifick Cause being expell'd by Sweats or other ways; and the Heterogeneous Particles contain'd in the Blood removed, or the Blood acquiring a new Constitution by conquering the said Matter, not so apt now to raise a Febrile Ferment, the immediate Agitation of the Blood ceases, without returning after certain Periods.

An Intermitting Fever is that which works not continually upon the Blood, but attacks the Patient at certain repeated times, and by intervals; so that he is sometimes found with, and sometimes without a Fever; and what a continual Fever does by one extended and continued Paroxysm, viz: a separation and conquering of the Heterogeneous Parts, this does by many Paroxysms, that commonly return at a set time. A continual Fever is either putrid or imputrid; which Distinction the Intermitting have not, because they are always putrid: By being putrid with the better sort of Physicians I understand the relax'd Contexture of the Humours,



or a separation of the Constitutive Principles of the Blood from one another ; by reason of which the Contexture of the Blood is more or less dissolved, and the principal Parts fly away.

A continual Fever then is call'd *Imputrid*, when the Febrile Fermentation of the Humours relaxes the Union and Mixture of the Principles not so sensibly, that the Blood is very much dissolved by it ; and yet the word *Imputrid* ought not to be taken very strictly, as if there was no Dissolution of the Blood and Separation of the Principles at all, which is impossible in an immoderate Fermentation of the Blood : This *imputrid* Fever, either continues only one Day, and is call'd *Ephemera* simply, the Name being taken from *Ephemera*, a Fly, which is thought to live but one Day ; or it is protracted two or three Days, and then it is call'd an extended *Ephemera*, or *Diary*, and by the Ancients a *Synochus imputris* ; but on the other hand a continual Fever is call'd *Putrid*, when the Effervescency of Humours immoderately agitated in the Blood-Vessels is strong enough, or lasts long enough, to occasion in the Blood a notable loss of the principal Parts, the Dissolution of its Contexture, and the Separation of its Principles. This putrid continual Fever is either acute, and quickly resolves its Period, by reason of the inward fermentative Motion, and the copiousness of the active Principles ; or Chronick and Slow, because the Fermentation, tho' Preternatural, is slowly perform'd, or because the Spirituous and Sulphureous Parts are scarce ; or lastly Hectick, which is then, when it is become habitual, and the Blood vitiated in all its mixture is no longer fit to nourish the Parts ; whence the Leanness, and Consumption that follow the Hectick Fever are to be deduced. In consideration also of the greater, or lesser loss of the principal Parts of the Blood, its Dissolution and the Separation of its Principles, one sort of putrid Fevers is call'd *Putrid Simply* ; a second is called *Malignant*, where there is a very considerable Dissolution of the Contexture of the Blood ; and the last is call'd *Pestilent*, when its Dissolution and the separation of the Principles are arrived to the highest pitch : That, which is simply call'd *Putrid*, the Ancients divided according

to the predominancy of the various Humours in the Body, in Bilious, Pituitous, Melancholy and Sanguine: Some Moderns have likewise divided it in Bilious, Sanguine, Lymphatick, &c. But these Divisions are of little or no moment; for we must not believe with the Ancients, that sometimes the Pituita alone, sometimes the Gall, Melancholy, &c. alone can Putrifie, by reason of which peculiar Putrification, that occasions the Fever, it gets its name from\* the aforesaid Humours; nor with the Moderns, that only the Lympha or Gall should Ferment, or cause a Fermentation; for that belongs to the whole Mass of Blood, and therefore all sorts of Fevers might rather be called Sanguine, as belonging to the whole Mass of Blood, and not to the Lympha or Gall only.

A putrid continual Fever, besides these already mention'd, has other Distinctions not less considerable; for sometimes it is simple, and then the Access being continued for some Days, it commonly terminates without any exasperation, or remission all the time it lasts; and is called by the Ancients *Acmaistica*, or *Homotonos*; but when it is augmented by degrees, the Rottenness of the Humours continually increasing, it is call'd *Epacmaistica*; and lastly, when the Rottenness of the Humours first raised by little and little decreases, and is by degrees insensibly corrected, the Heterogeneous and Fermentative Particles, that caused the Rottenness and Fever, being dissipated, evacuated, or subdued it is called *Paracmaistica*. Sometimes the putrid continual Fever is call'd Compound; when, besides its Continuity, it has periodical Exasperations and Remissions; and so seems as it were, a compound of a Continual and an Intermitting Fever; which Exasperations, according as they return every other, or the fourth, or fifth Day, are used to be call'd Quotidians, Tertians, Quartans, Quintans; or if there be more Exasperations every Day, every other, or fourth, nay the fifth Day returning, it produces a more compound continual Fever, viz. consisting of a simple Continual, and a double Tertian, a double or triple Quartan; according to the various times and mutual correspondence of the Exasperations; but if a Fever call'd Simple by reason of its Continuity, and

continual Quotidian, because of its daily Exasperation as consisting of a Simple Continual, and a Quotidian Intermitting Fever, has on the third Day likewise a new Exasperation, and a Paroxysm, imitating that of a Tertian Fever, then it is called *Hemitritius*; that is a Fever, consisting of a Simple Continual, and an Intermitting Quotidian and Tertian; of which the Ancients so often make mention. Having thus set down the various species of the Continual and Putrid Fever, I shall proceed to the Divisions of the Intermitting. An Intermitting Fever then, keeps its period returning at set times, and commonly the same Hours; or is disorderly unconstant and errattick, whose Paroxysms keep no order in the returning of the Days, nor correspond mutually; and tho' these Paroxysms succeed one another, or that one begins before the other is finished, this Fever is always call'd *Subintrans*. An orderly Intermitting Fever is Simple or Compound; Simple it is call'd, when the Fever invades and leaves the Patient but once in a Day, and according as that is returning every Day, every other, third, fourth or fifth Day, it is call'd a Quotidian, Tertian, Quartan, Quintan Intermitting Fever; the name being taken from that Day on which it returns; not as the Ancients did from the variety of the Humours, as the Gall, Putrida, Melancholy, &c. for they thought the Rottenness of the Pituita produced Quotidians; that of the Gall Tertiars, and that of the Melancholy Quartans; and that, as may be easily gather'd, without any reason or foundation: For which way could they by this Hypothesis explain the Fevers returning the fifth, sixth, and seventh Day, there being but four Humours? The differences therefore of Intermitting Fevers are rather to be deduced from the different Days, on which the Fevers return, than any other head; and I cannot see, why the double Tertian of the Ancients, that in their opinion returned every Day, and the Triple Quartan, which kept the same time, might not be placed among the Quotidians; when otherwise they would have it, that Simple Intermitting Quartans return'd the fourth Day, Quotidians every Day, and Tertiars every other Day; as well as Quintans the fifth, and Sextans the sixth Day; from

from which returning they have their Names. An Intermitting Fever is called Compound, when the Paroxysm returns oftner in one Day ; as twice, or thrice ; and this likewise as the Day varies, is call'd a Double or Triple Quotidian, Tertian or Quartan Fever ; and these are all the differences of an Essential Fever ; after which I proceed to the Divisions of a Symptomack Fever.

A Symptomack Fever, as we said of the Essential, is either Imputrid, when it relaxes the Mixture and Union of the Principles of the Blood not much, nor considerably dissolves its Contexture ; as it happens in those Fevers that attend the Cholick, Head-ach, Bloody-flux, Tooth-ach, &c. in which in consequence of the Motion of the Spirits disordered by the Pain, because of the more frequent Systole of the Heart, the Mass of Blood is variously agitated, and the Heterogeneous Parts, always more or less abounding in the Blood, are set to work : or it is putrid when it preys more upon the Blood, and relaxes more the Union of its Principles, as it happens in Fevers, that follow upon Inflammations, Ulcers, or Imposthumes of various Parts ; in which because from the inflamed, or ulcerated Part there flow some purulent Hot, or Fermentative Particles, that are mix'd with the Blood Circulating through the aforesaid Part, and by the very great *Heterogeneity*, by which they are so contrary to the Blood ; they dissolve its Contexture very much with a Fermentation, whence the Rotteness of the Blood proceeds. A Symptomack Fever, or that which is imputrid, is divided in *Ephemera*, or that which lasts but one Day, by reason of the little disposition of the Blood to a Fermentative preternatural Motion ; and that which lasts many Days for the contrary Reason. The putrid Symptomack Fevers of the Second sort are Acute, and Short, absolving their Periods quickly, commonly with danger ; or long and Chronick, that are extended to several Months, as slow, and Hectick-Fevers attending the Ulcers, or Imposthumes of the Internal Parts ; in which, because the purulent Effluvia are insensibly by degrees transfused into the Blood, its Mass is slowly, and by degrees dissolved ; neither does it



it ferment so violently as in most other Fevers, in which there is a greater quantity of Heterogeneous Particles, either bred in the Blood, or communicated to it.

When I speak of Symptomack Fevers, that accompany Inflammations, I would not have it thought that they are always Secondary, and produced after the Inflammation is made; for sometimes they are Primary and Essential, and in that case the Inflammation is their Symptom, for as much as the Vessels in some part are too much opened or broke, by the very great Fermentation in the Blood-Vessels; whence a lying down of the Humours, or Expansion and Extravasation proceeds, according to the various disposition of the Parts, and consequently an Inflammation follows: Of the Inflammatory Symptomack Fevers, that, as is said already, follow upon Inflammations, other less notable differences might be made according to the various Constitutions of the Blood, that raises the Inflammation, that is, according as it is more or less thin; the one is call'd *Erisypelatus*, and the other *Pblegmonodes*; but that Fever which accompanies an Ulcer or Imposthume, may justly be called a Purulent Fermentation of the Humours; and that which commonly attends a Gangrene or Mortification of some part of the Body, deserves the name of a Putrify'd and Gangrenous Fever. Besides the enumerated differences of Essential as well as Symptomack Fevers, which are the most principal and remarkable, the Authors make other Divisions that are less principal and more accidental, which are taken from Symptoms, and Accidents peculiar to them; as by reason of a burning Heat and unquenchable Thirst, which sometimes accompanies a Fever, it is call'd *Causon*, or a Burning-Pever; and by reason of an inward Heat, whilst the External Parts perceive a sense of Cold, it is call'd *Lipiria*: by reason of some red Spots, or Pimples appearing in the Skin it is call'd a Scarlet or Spotted-Fever; by reason of the frequent Colds and Shakings, or the Heat, and Cold it is call'd *Horrida*: And by reason of the frequent faintings *Syncopalis*; by reason of Worms join'd with it, that lodge in the Guts, it is call'd *Verminosa*; by reason of the Milk's being Accumulated in the Breast, which sometimes causes a

Fever,

Fever, it is call'd *Febris Lactea*; and by reason of a Catarrh, and other Distempers and Symptoms; it is call'd *Catarrhalis*, Arthritick, Rheumatick, Convulsive, &c. as by reason of other Symptoms it is call'd *Vomitoria*, *Torminalis*, *Famelica*, *Insana*, &c. which may be seen in *Sylvius*; when restlessness and vomiting attends it, they call it *Assodes*; when continual Sweats *Clodes*: And when Heat and Cold is felt in the same part *Epiala*.

Having exactly set down the various differences of Fevers, it remains that we should examine their Causes with the same diligence, which yet cannot well be done of all kinds of Fevers in particular; because it would lengthen this Treatise too much, and make it swell to an intire Volume; wherefore I shall only inquire into the Causes of the principal, and most remarkable differences of Fevers, whence afterwards those of the less principal will be easily gather'd. First to the greater Elucidation of this Matter we must observe, that the Ancients and the Moderns are of different Opinions about the Causes of Fevers; which having examined we shall consider whether we ought to subscribe to the Hypothesis of the former, or that of the latter. The Ancients then to begin with the *Ephemera*, which is the first Species assign'd by them, thought that it proceeded from an agitation of the Spirits of the Blood, &c. and a Hectick Fever they deriv'd from an inward Heat, first augmented in the solid Parts, and from thence transmitted into the Blood that washes them.

The Moderns in assigning the Causes to Fevers, as well Continual, as Intermittent, Putrid, or Imputrid have steer'd quite another Course; for having rejected all Occult and Malignant Qualities, the Motion of the Stars, the two Nutritive Humours, and moreover admitted the Circular Motion of the Blood, made by the Heart, which is relaxed and contracted by turns, they affirm that the Blood consisting of its above-mention'd Principles, and chiefly when it abounds with those that are active, or swells with Recrements, that, as being *Heterogeneous*, are to be separated from its Mass, or some Juices newly discover'd by the Anatomists, that are mediately or immediately carried into the Blood;

Blood; as the Chyle, the Lympha, and Pancreatick Juice, are the cause of all Fevers. *Willis* and *Sylvius Deleboe*, being the chief of the Moderns, the Hypothesis of either ought not to be quite rejected, nor altogether admitted; for some things are plausible, and other improbable in both; for as to the Pancreatick Juice of *Sylvius*, that by the Viscous *Pituita* is retained in the Lateral Ducts of the *Pancreas*, by intervals flows into the Duodenum, and after certain intervals pierces the *Pituita*, to cause Intermittent Fevers, is confuted sufficiently, because it is barely alledged, and has no show of truth. But his Opinion of the Lympha and Gall, which by the same Author are reputed to be the Causes of continual Fevers, no Man ought to reject; for of one side the Lympha abounds with Acids, and the Gall on the other with Lixivious Salt; and consequently, by reason of this Heterogeneity, these two Juices are very apt, when both, or either of them are excessively exalted, to make a preternatural and Febrile Fermentation in the Blood; as they are fit in a lesser degree of Exaltation to uphold the native Heat, and preserve the natural Fermentative Motion. So likewise the raging of the Spirits and the Sulphur, which *Willis* alledges as the immediate Cause of continual Fevers ought not to be admitted; tho' I deny not, but that those two principles are commonly exalted in Fevers; which consequently, as being easily moveable, help the Blood to undergo the Preternatural Motion: yet this Fermentative and Preternatural Motion might with more right be attributed to the Disproportion and Heterogeneity of the Particles that compose the Blood, or the Irregularity and Immiscibility of the Lymphatick Juice, that continually is carried into the Blood from the Conglobated Glandules; which makes that, because of the different and irregular Figure of the Particles, that are to be mix'd, and yet cannot be mix'd easily, as it happens in other Effervescencies, they promote the copious entrance of the Æthereal Matter, and retard the Particles of the Blood, that moves on all sides and expands it self: The more because there are some Fevers; as an inveterate Hectick Fever, in which the Spirits are not so predominant: Moreover because it cannot be explain'd,

explain'd, how by adding something Heterogeneous to the Blood, or any other Liquor, the Spirits and the Sulphur should suddenly be made to rage, and strive to fly away, as *Willis* would have it requisite to excite an Effervescency or Fermentation: for if they are in a sufficient quantity and a due degree of Exaltation, why are they not fermented before the arrival of the Heterogeneous Body, as well as after that is mix'd with them. But that the Nutritious Juice or the Chyle being imperfect, either of it self, or by reason of a fault in the Ferment of the Stomach, or any other belonging to the Chylification, or poured into the Blood more or less degenerated; that is, deviating from the usual Figure, and site of its Parts, is the Cause of various Intermitting Fevers, as the same Author asserts, is not without foundation; for if the continual arrival of the Chyle into the Blood, both being naturally constituted, be able, as no body doubts but it is, to excite a Benign, and natural Fermentation in the Mass of Blood, as appears by the Pulse some Hours after Meals, the refreshing of the Strength, the increase of Heat, and renewing of the Motion of the Spirits; certainly the same Chyle deviating from its natural state, that is, being more crude and less digested, or finding Blood, that is changed to an Acid sharp, or any other vicious or perverse disposition, caused by the predominancy of its various Principles, or the alteration of the Figure and Site of its Parts; is capable of raising a more than natural, and consequently Febrile Fermentation in the Blood, and procuring a greater Heat to all the Body; and that, to come to the Cause of Fermentation, by reason of the great Disproportion, and Heterogeneity of the Liquors to be mix'd, the Chyle and Blood, which promote the copious entrance of the Æthereal Matter, that very much stirs, and agitates the insensible Parts. This Hypothesis of the Cause of Intermitting Fevers is built upon the Sanguification, which is made by the dissolution of the Fat, and Sulphureous Particles of the adventitious Chyle, by the sharp and Lixivious Salt of the Blood, and the Heat which changes them from white to red; for Chymistry teaches us, that Fat and Sulphureous Bodies are only dissolved by sharp Sales,  
and



and that when dissolved they assume a red Colour; this Dissolution of the Particles of the Chyle in its natural state is made slowly, and without great Commotion of the Parts, that compose the Blood, by reason of the moderate disproportion of the Chyle with the Blood; but when they are very much disproportioned, by reason of their Heterogeneity the Dissolution is perform'd with greater Violence; that is, with greater Tumult and Agitation of the Particles of the Blood and Chyle, that are to be mix'd together; because the proportion which both the Blood and Chyle ought to have is wanting, which makes them when they meet undergo a greater Effervescency; nay the Chyle, when it is either imperfect, or when it comes to Blood, that is not naturally constituted, cannot duly be subdued, and turned to Blood for want of that proportion, which always ought to be betwixt the *Agent* and the *Patient*; and this is the reason, that out of the Mass of Chyle coming to the Blood after the time of Digestion, there are always some Particles left that resist the force of the Blood, and cannot by reason of their Crudity, Grossness, &c. submit to Sanguification: Which afterwards, like to many Heterogeneous Particles Restagnating in the Mass of Blood, tho' in a lesser quantity, as being intangled in the Blood, they are not able to cause a Febrile Paroxysm, may do the same when they are accumulated together like Liquors that cannot ferment, but when they are mix'd to a certain quantity; this Exaltation and Accumulation of the Particles of the Chyle is made only after many Concoctions of the Stomach, and many Sanguifications and Digestions, yet more quickly or slowly to make Quotidian, Tertian, and Quartan Fevers; according as the fault of the first Concoction is greater or lesser, and the Blood recedes more or less from its natural mixture; to erect then as much as is possible, a probable Hypothesis about the Causes of Continual and Intermitting Fevers; the Opinions of *Sylvius* and *Willis* are so to be mix'd, as to make one; and what *Sylvius* asserts of the Continual is to be joined with what *Willis* lays of the Intermitting Fevers; but, as I said before, we must reject both what the first affirms of the Causes of the Intermitting, and

and what the latter asserts of the Causes of continual Fevers. And for the confirmation of this Hypothesis, already explain'd at large, it is sufficient to say, that all the *Phænomena*, as well of Continual as Intermitting Fevers, are much better deduced from it, than from any other whatever; for as for the Continuity of Fevers, since the Gall is always in the Blood, and the Lympha is likewise brought to it continually from the Conglobated Glandules, it is certain; that, when either of them are Peccant, that is, when the Lympha is too Acid, or the Gall too Sharp, and Lixivious, from thence a more violent than natural, and consequently Febrile Fermentation must follow; which must be continual, because the Cause is always present: The more because the better sort of Physicians of this Age adscribe the Cause of the natural Fermentation of the Humours, in which Health consists, to the mediocrity of the quantity, and quality of these Liquors.

As to the intermission of Intermitting Fevers: It may very probably be deduced from the now erected Hypothesis of *Willis*, that is from the Particles of the Chyle, at certain times accumulated and exalted in the Mass of Blood: Which Intermissions, as well as the Febrile Paroxysms, may be vary'd many ways, according to the various and many faults and crudities of the Chyle that is to be converted into Blood, and the often mentioned various disposition and mixture of the Blood; in like manner may the variety found in continual Fevers be deduced from the various Exaltations and Qualities of the Lympha and the Gall, either separately, or jointly peccant; and from the Blood, which by it is more or less dissolv'd, putrified or depraved; for other reasons, that confirm the Cause of Intermitting Fevers, which now with *Willis* we have allow'd of. First that by fasting, and abstinence from Victuals, Intermitting Fevers are often cured, and that by eating much, and errors in Diet the Paroxysms are hasten'd and return more frequently; and on the contrary by a spare and sober Diet the same are lessen'd and retarded: As also, that, which is remarkable, Intermitting Fevers are better cured by Vomits, than any other Remedies; all which make a strong Argument that the fault of  
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the said Fevers lies in the Office of the first Concoction; and the Nutritious Juice of the Chyle: But when with *Sylvius* we derive the continual Fevers from the Gall and Lympha, as being the Principles that foment the Fermentative Motion of the Blood, from which the Heterogeneity between the Particles that compose the Blood is derived, it is only to be understood of Essential Fevers, that are principally bred in the Blood; and not of those that are Symptomack, and come upon inward Inflammations and Ulcers; for they have Causes, that are evident enough, *viz.* the *Effluvia*, or Particles flowing from the inflamed and ulcerated Parts, because they are communicated to the Blood, that Circulates through them Parts, and because they are Heterogeneous and most commonly endued with a great Motion, dispose the Blood to a preternatural Fermentation.

Having said thus much of Continual, and Intermitting Fevers in general, we must now endeavour probably to deduce the various forms of Fevers in particular from the said Hypothesis; and first, to begin from the Simple-Continual, the Ephemera either of one, or more Days seems to own for its Cause the Gall, by several Procatarctick Causes, as being in the Sun, hard Labour, Drinking, &c. made sharper something more than it is in its natural State, which consequently is able to produce in the Blood not a violent and lasting Fermentation with the Lympha, but a short and little one, and consequently a less separation of the Constitutive Principles of the Blood, and a lesser Putrifaction of the same. The Gall and Lympha, much more peccant, that is in a greater quantity and degree of Exaltation, than in the Ephemera are the Cause of the putrid Fever; For since from thence a much greater and more lasting Fermentation of the Humours proceeds, the Union of the Principles that compose the Blood, is more relaxed and consequently the Mass of Blood is more putrified.

The slow Fever which is of the putrid sort, seems to proceed from the same Causes being slower, and requires moreover, for its Generation, Blood, that is deprived of Spirits and thin Sulphur; the defect of which, as concurring to the greater Fermentation, makes that the Blood cannot Ferment, but slowly and remissly, yet in a preternatural way. The

The Essential Hectick Fever, which differs little or nothing from the last mention'd, is produced the same way; but the Symptomatick Hectick Fever, following upon slow Ulcers of the Internal Parts, proceeds from the purulent Heterogeneous Particles, that are continually communicated to the Blood; and by being less copious, raise only a gentle Effervescency in the same.

The Cause of the Malignant Fever is a very sharp and Lixivious Gall, or some very sharp Particles, received in the Blood from the Air or a Contagion, that exalt the Gall very much in its Acrimony; whence since the Blood is much dissolved and impair'd by them, very grievous Symptoms proceed, which are proper and peculiar to this kind of Fever.

The Pestilent Fever, which is, as it were, a degree above the Malignant, has the same Causes with that, only more intense, and consequently is attended with the like, yet more grievous Symptoms.

A burning Fever proceeds from a violent Effervescency of a very Oily and sharp Gall, and an Acid and Viscuous Lympha; thence the burning Heat and unquenchable Thirst are likewise to be deduced, because the Particles of the Blood are grosser, and therefore when once brought to a Febrile Motion, they make a greater Impression, and consequently a more Intense Heat.

The *Lipiria* has its Origin from an Oily and yet sharp Gall, and a Lympha that is both Acid and Thin; which makes that whilst a great Fermentation is raised in the large Vessels, in the Extremity of the Capillary Vessels, and about the Surface of the Body, the Lympha, which is both Acid and Thin, by its Thinness runs out and falls upon the *Panniculus Carnosus*, or the common Membrane of the Muscles; where by its Vellication it produces the Sense of Cold: Or, if the *Lipiria* be Symptomatick, and follows upon the Inflammations of the Stomach, Midriff, and *Præcordia*, it is deduced from the already mentioned Particles, that come from the Inflammations, and are communicated to the Blood, to which they are Heterogeneous; which Particles raise a Febrile Fermentation, chiefly in the great Vessels, and about the inward Parts that are affected, whilst the Ex-



ternal Parts are not so much heated, because of the distance from the inflam'd Part, or because the Motion of the Humours in them is more remis, or because the Acid Lympha prevails; or lastly because the Heart, by the Internal Inflammations being drawn into a *Consensus*, or not well performing its Syttole, the Blood is not push'd sufficiently to the External Parts to warm them.

The *Epiala* and Horrifick Fever are not owing to very dissimilar and different Causes, yet this they have peculiar, that the Acid *Lympha* is predominant over the Oily and sharp Gall; in which, since the Blood Circulates through all the Parts, by reason of the either continual, or often returning Extravasation of the said Acid Lympha, there is either felt a mix'd Sense of Hot and Cold, or frequent Shiverings are produced.

The *Elodes* is owing to a Gall, that is more sharp than Oily; by reason of which all the Blood is dissolv'd into Serosities, which are evacuated through the Glandules of the Skin, the Febrile Heat, which makes them separate themselves, concurring to it.

The Verminous Fever is owing to the putrid *Effluvia* from the Guts, where the Worms are bred, through the Milky Veins transmitted into the Blood.

The Syncopal is imputed almost to the same Cause that produces the Malignant Fever, by reason of which the Blood being depraved and altogether worn out, neither furnishes the Heart with a due quantity of Elastick Matter, nor the Brain with the pure Substance that is requisite for the Generation of the Spirits.

Thus we must reason of all the other less principal differences of Simple Continual Fevers, which commonly are not very remarkable, and only fetch'd from the various Accidents and Symptoms that used to attend them; as Vomiting, a Delirium, Convulsions, Anxieties, and what is deduced from the Morbifick Matter, brought to the Stomach, Head, and Muscles, from the several faults of the Gall or Lympha; as likewise, which is chiefly to be observed in all kind of Fevers, from the different disposition and mixture of the Blood, from the various union of Principles, and Exaltations depending upon it, which may be vary'd a thousand ways, and consequently produce many different Species of Fevers:

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As to the Intermitting Fevers, whose Causes we say with *Willis* are the Nutritious Juice, or various Depravations of the Blood, the Quotidian, Tertian, Quartan, Simple or Triple, the Erratick, as also that which is call'd *Subintrans*, all which differ only accidentally; they all make but one Species of a Fever, since the Cause of all of them is but a greater or lesser fault in the Chylification; a greater or lesser Depravation of the Blood, and in it a greater Exaltation, sometimes of the Lixivious Gall, sometimes of the Acid Lympha, and sometimes of both, or a Predominancy of various as well Active as Passive Principles; all which, according to the more quick or slow, the more or less copious or frequent they make this Accumulation of Chylous Particles, not well subdued by the Blood, and like something Heterogeneous Restagnating in the same, produce likewise Febrile Paroxisms, that are short or long, rare or frequent, or disorder'd, and sometimes anticipated, and sometimes retarded, according to the various Use of the six unnatural things: Yet it is to be suspected, that the Morbifick Matter, or the Febrile Ferment is more gross and unactive; as also more intangled in Quartans, Quintans and Sextans; and more thin, free and active in Quotidian, Tertian and other Fevers: In which the Paroxisms return often; that is, that the Acid Lympha, which makes the Blood of a sour and crabbed disposition, is chiefly peccant and predominant in those Species of Intermitting Fevers that return seldom, and have their Paroxisms twice in four, five, or six Days: And the sharp and preternaturally exalted Gall has the predominancy in those that more frequently return; and this also agrees with Experience; for we see commonly that those that are of a melancholy temper, and have thick sour and crabbed Blood, are more subject to Quartan and Quintan Fevers; whilst others that are of a bilious sharp Temperament, are chiefly inclined to Quotidian, Tertian, or oftner returning Fevers; the slowness likewise and lesser activity of the Ferment in Quartan and Quintan, than in Quotidian and Tertian Fevers, is chiefly proved by the duration of the Paroxisms; which is much greater in the first than the latter; the reason of which is that it

cannot so suddenly have its Effect, partly because the Ferment it self is not so thin and subtil, partly because the Blood is grosser and makes more resistance.

As to the Paroxifms of the intermitting Fevers, which are here to be consider'd, they differ not only in their numbers, and more or less frequent Returns, but they are likewise different in their Humours, and of various Forms. For sometimes after the cold and hot Fit no Sweat follows, sometimes there is Heat, and Sweat without any Cold gone before it, sometimes the cold Fit is less and shorter and the hot Fit long and violent, sometimes the contrary happens: Yet most commonly when the Fever is settled, First the cold, then the heat, and afterwards Sweats are observed: The cold proceeds partly from Chylous Particles that are not well subdued, and consequently Acid, accumulated in the Blood, and brought together with it by Circulation to the Membranous Parts of the Body, and the common Membrane of the Muscles, and by the beginning Effervescency of the Blood more agitated, and like so many Needles stuck into them; partly from the sharp or Acid Particles of the Blood, according to the various Disposition of the same, by means of the beginning Effervescency, getting out of the extremities of the Capillaries, and Vellicating the sensible Parts: And this Cold lasts, ceases, or is interrupted, according as the Chylous Particles are either intrangled or at liberty, according to their Copiousness or Inequality, and the different Constitution of the Blood; but the Heat which succeeds the Cold is deduced from the following great and Intense Agitation and Effervescency of the Particles, that compose the Blood; because it is impossible, but all the Parts of the Body must be heated: For tho' Experience tells us, that there may be Fermentative Motions without heat, as in the dissolution of Coral; yet that cannot have place in the Fermentation of a Fat, Sulphureous Liquor, as the Blood is, as we have observed in the beginning of this Treatise: It may proceed likewise from the Gall, which at that time is predominant over the Lympha, as in the beginning of the Paroxifm the cold was owing to the predominancy of the Lympha, and the raw and acid Particles of the Chyle, over the Bilious and Sulphureous Parts of the Blood,

Blood. Lastly the Sweat proceeds from the very great Agitation and Motion of the Parts of the Blood, by reason of which a great quantity of Serum is carried to the *Miliar Intercutaneous* Glandules, which are the Strainers of the Sweat; as it happens in violent and lasting Exercises, and the heat of the Summer; partly from the great Liquidity and Dissolution of the Blood, which follows upon the inward Effervescency; by which the Serum is more disposed to get out, to which the Ampliation and Dilatation of the Pores of the Skin from the heat chiefly concur, and then ceases the Paroxysm; because the Crude Chylous Parts that are Heterogeneous to the Blood, are by the great Agitation of its Particles subdued, and its Principles acquire a new Site and a new Figure and Disposition; and now permit no longer, as before, the immoderate entrance of the *Æthereal* Matter, that used to disturb and agitate them; or because the Heterogeneous Particles are Precipitated or sent away to the Strainers, which being excluded, or no more mix'd with the Blood, its Febrile Motion must necessarily cease. But this Sweat, as well as the Heat and Cold that go before it, may be varied a thousand ways; that is, sometimes there is no Sweat, when the small Dissolution of the Blood, or the excessive Viscidity of the Lympha hinder the separation of the Serous Humour; sometimes it is more, sometimes less copious; sometimes it lasts a longer or shorter time, according as the Causes, which we have said are apt to raise it, are more intense, or remiss, and exert their power either quicker or slower; what we say of the Sweat is likewise to be said of the Heat and Cold, which are either absent, or less, and last a longer or shorter time according to the various degree of Exaltation, and Copiousness of their Causes already explain'd.

Having as well as we could explain'd the Causes of the Simple Continual, and Intermittent Fevers, it now would be time to propose at large the Causes of those that are call'd Compound: But because, as we have observed already, the Compound Fevers, or those that besides their Continuity have Exasperations, and as it were Periodical Paroxysms every Day, every other, third, fourth Day returning; for which reason they are call'd



Quotidian, Tertian, Quartan, &c. Continual Fevers; because, I say, these Fevers are mix'd, and made up as it were of Continual and Intermitting Fevers, we should seem to do what is done already, if we should spend more time in alledging their Causes, that are nothing else but on one side the several faults of the Gall and Lympha, by which the Blood gets an Heterogeneity, fit to produce a Continual Fever; and on the other side the imperfect and degenerated Chyle, poured into the Blood, which is of a different Nature, and not well subdued; whose raw and undigested Particles are at certain times accumulated in the Mass of Blood to make the Febrile Paroxysm, which is shorter or longer, quicker or slower in returning, attended with Shiverings, Sweats, and other Symptoms, according to the greater or lesser *Heterogeneity* of the Blood, the various faults of the Chyle, and the quick or slow Accumulation and Exaltation of the Chylous Particles; as also, because there are several Causes of the continuity of the Fever; the many Species of compound Fevers arise from the manifold combination, or rather complication of the Causes of the Continual and Intermitting Fever. I purposely pass by here the Explication of the various Symptoms, that are used to attend the Simple Continual, and Intermitting, as well as Compound Fevers; as Vomiting, a Loosness, Deliriums, a difficult Respiration, Drought, Watchings, Convulsions or Convulsive Motions, &c. First because it would swell this Treatise, which I design but for an *Epitome*, to an intire Volume; and because, which is the chiefeft reason I say nothing of them, the greatest part of them may be explain'd out of the History of the Distempers set down already, where the said Symptoms are expounded at large.

As to the Diagnosis of Fevers: A Fever may be sufficiently known from what has been said in its general Definition; that is, from the Heat, which is diffus'd through the Body, because of the augmented Effervescency of the Blood, and the violent Motion of its Particles; as also from the Pulse, the Elevation of the Arteries being accelerated beyond its natural state, which Celerity of the Pulse depends upon the more frequent and oftner repeated *Systole* of the Heart, which pushes

pushes the Blood into the Arteries, partly because the Animal Spirits that serve the Heart are by the Febrile Heat made more active and nimble, and consequently fitter to contract the Heart more frequently, partly because the Blood more heated by the Fever, and consequently having more exalted Principles, furnishes the Heart more quickly and copiously with Elastick Matter to quicken its Motion; which Pulse, if sometimes it be little and weak, proceeds from the lesser Contraction of the Heart, by reason of which the Blood is not totally expell'd out of its Ventracles; and that partly by reason of the Defect and Dissipation of the Spirits, partly by reason of the great Depravation of the Blood, not furnishing the Heart any more with a due quantity of explosive Matter: But if it be full, high and elevated, it proceeds from the contrary Cause; and is a sign that the Spirits are in a great Motion, and copious, and the *Elastick* Particles of the Blood not yet consumed or depraved; and this is the reason, why in the beginning of all Fevers the Pulse is most always high and violent, and grows as the Distemper Increases weak and little: I say most always, because it may happen sometimes, that the Blood not being yet depraved, or putrified much, but filling the Veins and Arteries in a greater quantity, when once it conceives an Effervescency, and requiring more room, distends the Vessels, I say, it may happen, that there is a weak and little Pulse, for as much as the Blood once enter'd the Ventracles of the Heart cannot all be thrust by the contraction of the Heart into the Vessels, as being sufficiently fill'd, and turgid with Blood already, which makes that the Blood which is retained in the Cavities of the Heart, by resisting its contractive Motion, lessens its *Systole*, and consequently the Elevation of the Arteries which proceeds from it; and in this case the debility and smallness of the Pulse are a sign of what the Physicians call an Oppression, and not a Dissolution of the Strength, which proceeds from a defect of the Spirits and a faintness of the Blood.

The Signs of Essential, and Symptomack, as also of Simple Continual, Intermitting, and Compound Fevers are sufficiently manifest, from what has been said,

where we set down their general Divisions not to be here related again. But a Continual Imputrid Fever, that is a Simple or extended *Ephemera* or *Synochus*, is known; First, by that it lasts but a Day or two, and that it most commonly proceeds from Procatartick Causes: Secondly by that the Heat is not so Intense, because the Effervescency is not so strong, and consequently the Symptoms are more remiss: Lastly by that, besides what we have said already, it has no Exasperations in the beginning, little or no Shivering, and commonly ends with a gentle Sweat.

A Continual Putrid Fever is known, partly by its Duration, lasting several Days, nay Weeks sometimes; partly by the more Intense and violent Heat, proceeding from the greater Agitation and Effervescency of the Particles of the Blood that breaks the union of its Principles; and partly by the Shaking in the beginning, and other more grievous Symptoms, that come to it: As Nauseating, Vomiting, Head-achs, immoderate Watchings, Anxiety, Blackness and Drieness of the Tongue, Droughr, &c. An Acute Continual Fever is manifested by the Weight and Multitude of the Symptoms, the Violence of the Heat, and the little duration of the Fever by the Pulse, which is high and quick: But the Chronick or Hectick Fever, because they are nearly related, is known by the long Duration, for it lasts many Months: Secondly, by the Symptoms, that increase by degrees, and successively: Thirdly, by the little Heat, which yet is increased some Hours after Meals, because of the entrance of the Chyle into the Blood: Fourthly by the debility and smallness of the Pulse: Lastly by the Atrophy and Consumption, which by degrees invades the whole Body. A Malignant Fever betrays it self by the Dissolution of the Blood, which is apparent in it, when drawn from a Vein, and shewn by Hemorrhagies, that can't be stopr, by Pimples and Spots breaking out in the Skin, by frequent Faintings, the small Heat of the Body, Vomiting, Hickups, Convulsions, Deliriums, a weak and little Pulse. But a Pestilent Fever is known by the Contagion, the great number of Patients, and their frequent Deaths; as also by its being Epidemick and owing to a common Cause, which

is either Food or Air that are corrupted ; as also by the Bubo's, Pimples, Carbuncles, and abundance of other grievous Symptoms that attend it. But whether a Continual Putrid Fever be *Acmaſtick*, *Paracmaſtick*, or *Epacmaſtick* ; as also whether it be Ardent, *Lipiria*, *Epiala*, *Catharralis*, *Elodes*, *Purpurata*, *Vermiſoſa*, *Laſtea*, Arthritick, or Rheumatick ; that I ſay may be ſoon gathered from what we have ſaid about the Differences of the Fevers, or from the Diſtempers and Symptoms, with which it is joined.

A Compound Fever, that is, a Continual Quotidian, a Continual Quartan, Semitertian, &c. are manifested by that they have Exaſperations, beſides their Continuity, that return every Day, every other, Third or Fourth Day, or a Paroxiſm that comes twice in four Days.

As to the *Diagnosis* of the Intermittent Fevers : it may not only be had from the Cold, Heat, and Sweats, ſucceeding one another, but also by the Remiſſions, that follow after the Paroxiſms. Whether an Intermittent Fever be orderly or diſorderly, may be known by the regular, or irregular returning of the Fits. And whether it be a Simple Quotidian, Tertian, Quartan, Quintan, &c. appears by the returning of the Paroxiſms every Day, every Third, Fourth or Fifth Day ; as also by their Duration : As also whether it be a double Tertian or Quartan is manifeſt from other Paroxiſms, returning every Day, every other, or third Day ; for as we ſaid before, the Intermittent Fevers borrow their Names from the Days on which the Fits return. A Symptomack Fever, which we ſaid is not raiſed principally in the Blood, but in conſequence of other Diſtempers, is eaſily known, and whether it is to be call'd Inflammatory, *Phlegmonodes*, *Eriſypelatodes*, *Purulent*, or Gangrenous, appears ſufficiently by the preſence of an Inflammation, *Eriſypelas*, Impoſthums, or Ulcer, Gangrene, &c.

The Prognosis to be made in Fevers cannot but be various, by reaſon of their various and manifold Species and Natures. The *Ephemera* is the leaſt dangerous of all ; by reaſon of the little Putrefaction of the Humours : In a Putrid Fever is more danger, which is to be pronounced greater or leſſer, according to the Weight and multitude



multitude of Symptoms that come upon it: A slow and Hectick Fever, if they be Essential, may be cured in the beginning, but not, when they become to be habitual and confirm'd, nor when they are Symptomatick, and depending upon Ulcers of Internal Parts: The Acute, Ardent Syncopalis, *Elodes*, *Lipiria*, and Convulsive Fever are always of an ill omen; but the *Catarhalis*, *Lactea*, *Verminosa*, Arthritick, and Rheumatick Fevers portend not so much danger. The Malignant, Scarlet, and Pestilent Fevers are to be counted the most pernicious of all; by reason of the very great Putrefaction of the Humours, and the Thinness, and Dissolution of the Blood: A Simple Continual Fever, that is one that has no Accesses or Exasperations, tho' it is not without danger, yet is more so than a Compound one, that is, one that, besides its Continuity, is every Day, or every other Day exasperated: A Symptomatick Fever is to be called more or less dangerous, according to the greatness of the Distemper on which it depends; wherefore, that which follows upon Inflammations of any noble Internal Parts, or such as perform some Essential Function, ought to be always suspect; but those that attend Inflammations of External Parts, as *St. Anthony's Fire*, a Simple Bubo, are not so dangerous: In a word, all Acute and Putrid Fevers ought, as is said already, to be judg'd more or less dangerous according to the weight and multitude of the Symptoms, as also according to the Age, Temperament and Strength of the Patient. When a Fever is not Continual, but Intermitting, it is most commonly void of danger; and therefore says *Hippocrates*, that Fevers that Intermit, which way so ever they do it, are without danger: I say most commonly; For if a bad Constitution of the Air, or Food, very much depraving the Blood, and rendering the Fever Epidemick, be the Cause of the Distemper, or the Patient often relapses into the same; or lastly, if the Intermitting Fever be raised in a Coccochymick Body; in all these Cases there is cause to fear, and the hopes of Recovery are not so certain. Quartans last longer than Tertians, and those that are contracted in the Summer, are sooner cured than others contracted in the Autumn; because in the Quartans,

Quarrans, and those contracted in the Autumn, is a greater obstinacy of the Morbifick Matter, as being thicker, and the Acid Disposition of the Blood is more difficult to be corrected : As also, because in the Summer the Pores of the Body are more open, the Humours thinner, and more disposed to an Evacuation and Dissipation ; which they are not in the Autumn, and the beginning of the Winter. The *Subintrant*, and Erratick Fevers are more dangerous than those that keep their Periods ; as also those that have long, than others that have short Paroxysms. In the Fits of all Intermitting Fevers, Sweating is good ; because the Heterogeneous Particles are after Fermentation separated from the Blood chiefly that way ; nay the frequent Observations of Physicians attest that Sweating, so it be not cold, nor too copious, nor come when the Strength is decay'd, is beneficial in all kind of Fevers ; so that all Fevers most commonly cease after Sweating. The Compound Intermitting Fevers, that is, the double or tripple Tertian, or the Quartan alone, and those, whose Fits are attended with grievous Symptoms ; as a Delirium, a weak Pulse, Thirst, short and difficult Breathings, Vomiting, the Head-ach, &c. are much more dangerous than others, that are Simple, and have no such Symptoms.

As to the Cure : We shall only touch it in general, as it concerns almost every Species. Continual, and chiefly the Acute, as also Malignant Fevers are chiefly cured by Phlebotomy, often repeated ; according to the greatness of the Distemper, the Strength and Age of the Patient, sometimes in the Arms, sometimes in the Ankle, according as the Indications vary ; as also by cooling and Acid Remedies that temper the rage of the Blood ; such are all cooling Herbs, Roots, Seeds, and Distill'd Waters ; as also the Acid Spirits and Juices, of which we have often made mention in our Discourse of Diseases, and which may be made into Broths, Juleps, Emulsions, &c. in the said Fevers cooling and purging Glysters, now and then injected, are proper, especially if the Body be bound and Costive ; Purges are likewise to be prescribed in due time, of cooling Decoctions, with Tamarinds, Senna, Cassia, Manna, Solutive Syrup

Syrup of Roses, Powder of Jalap, or Diacarthamum, if you would Purge more strongly. An *Ephemera*, and *Imputrid Fever* wants not so great a show of Remedies, for it either ceases of it self, or is cured after once or twice bleeding, or the short use of some other Remedy.

But the *Putrid Fever*, whether it be with or without *Exasperations*, requires many Remedies, and the use of them for a great while. Yet Note, That in this, as in all other sorts of Fevers, various Medicines must be prescribed, according as the Symptoms vary that attend them; for when there are Watchings, a Delirium, Frenzy, Convulsions, Narcoticks are to be given presently, and the *Saphena* is to be open'd: if there be Vomitting after the Evacuation of the bad Humours, that promote it, exhibit likewise Laudanum, or Acids, which restrain Vomitting very much: If there be a Loosness, especially if it be Symptomatick, Colliquative, or lasting; First prescribe Anodine, then Deterging, and at last adstringent Remedies: If there be a Translocation of the Humours, causing some sleepy Distemper; after Bleeding in the Arteries, prescribe Emetick-Wine for a Potion, if the Strength will bear it: if there be a Stoppage in the *Viscera*, and a Distension of the *Hypochondria*, use Glysters often, and such as Purge strongly, and prescribe Emollient Fomentations; and so we ought to reason of other Symptoms, that come upon these Fevers.

An ardent Fever, by reason of the Intense Heat, requires more copious and more frequent Bleeding, and a greater use of Acid and cooling Remedies; always remembering the *Universalis*.

That, which is call'd *Syncopalis*, requires Spirituous, and strengthening Remedies; yet moderately taken, not to increase the Fever.

In the *Elodes*, or that which is attended with great Sweating, use Remedies that can hinder the Liquidity and Dissolution of the Blood; such are the already mention'd acid and cooling, &c. Remedies.

The Malignant, Scarlet and Pestilent Fever, which are very nearly related, and thin, and dissolve the Blood, are cured by Bleeding, whatever the Ancients say to the contrary, thinking wrongfully, that Bleeding draws the

the Venom from the Surface of the Body to the Center; after that prescribe instead of Alexipharmacks and Cordials, that yet more dissolve the dissolv'd Blood, cooling and acid Remedies, that correct the Dissolution of the Blood; not forgetting the other *Universalia*.

The Symptomack Fever as the Rheumatick, Arthritic, Dysenterick, Catarrhal, Verminous, and that, which follows upon all Inflammations; as also the slow Fever, that used to attend the Ulcers of the inward Parts, requires no other Method of Cure, than that, which we prescribed, when treating of the Rheumatism, Gout, Worms, Pleurisie, Peripneumony, an Inflammation of the Liver, Stomach, &c. a Catarrh, Internal Ulcers, the Phthisick, &c.

The Slow and Hectick Fever, when they are Essential, are cured with almost only altering and moistning Remedies; so that Bleeding in them is of little use, no more than strong Purging; but gently Purging Glysters, now and then injected, and gentle Purges, that Evacuate by degrees, a Bath of fresh Water are proper in this case; which latter yet in other, and especially Continual and Acute Fevers, is to be shun'd worse than Poison; because by hindering the Transpiration it augments the Fever; Milk, Whey, Cows, and Asses Milk, yet moderately taken, because they cannot be well digested in great quantities, are likewise proper; as also Analeptick, and restoring Remedies; as strong Broths, Jellies, Victuals of good Juice, adding now and then things that are Volatile and Spirituous in a very small Dose.

If a Slow Fever be fomented by a Stoppage, and Obstruction of the *Viscera*, as sometimes it happens, by reason of which the Recrements of the Blood cannot be separated from its Mass, then temperate opening Remedies are to be intermix'd between those already mention'd, and Emollient Fomentations prescribed.

As for the *Epiala*, *Lipiria*, *Horrisica*, and other Agues, in which Shiverings and Shakings, or a Sense of Cold frequently infest the Patients; in these, because the Acid seems to be predominant, after sufficient Bleeding, and other universal Remedies, it will not be amiss, to prescribe Sudorificks; especially such as are of thin Parts,  
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and very suble; for the others stir the Blood not enough, which yet, when the Fermentation remits, and after some Phlebotomies is to be done: Nay many Authors are of Opinion, that Diaphoreticks are proper in all sorts of Fevers, because these commonly terminate in Sweating; and Nature is consequently to be led that way it points: and tho' Diaphoreticks seem suspect in all, especially Acute Fevers, because they augment the Fermentation of the Humours, which is Intense enough already; yet these Remedies are not so much spoke against, when they are in due time, and with judgment administered; for they help much to the Evacuation of the morbidick Matter, for as much, as, by promoting Sweats, they extricate from the Mass of Blood, the Salts, that are chiefly dissolv'd in the Serum, and contribute very much, if not all, to the fomenting, nay even the raising of the Fever. Yet in administering them this precaution ought to be used; that the Effervescency of the Humours be not very Intense, and that the Blood Vessels are emptied sufficiently by Bleeding; and this is the reason, why the most Eminent Physicians now a-days, in Scarlet and Spotted Fevers, the Measles, and Small-Pox, nay even Malignant Fevers, in which Nature pushes towards the Skin, and the Circumference of the Body, all what is Heterogeneous; tho' they doubt not, but the Blood is already thinner, and more dissolved than it should be; prescribe yet sometimes the Powder of Vipers, and other Diaphoreticks; which, if on one side they seem to do harm, by making the Blood thinner, yet do good on the other, by expelling whatever is found *Heterogeneous* in the Blood, and helping the Motion of Nature; which being done, the Blood recovers afterwards more easily its former Consistence.

Besides what has been said already, there are other things likewise to be observed in the Cure of many Fevers: First, That in Malignant Fevers, and where the Blood is very much dissolv'd, no Cupping is to be prescrib'd; that the Blood being made altogether Fluid may not so run out through the Passages that are open'd, that it cannot be retain'd or stop't. Secondly, That the more acute the Fever is, the more spare the Diet ought to be. Thirdly, That Bleeding is proper, chiefly in the beginning,

beginning, and when the Effervescency is greatest: but Purging, when the Fever and Effervescency remit. Fourthly, That when the Pulse is little and weak, or even Intermittent, Diaphoretick, and Spirituous, and not Narcotick Remedies are of use. Lastly, That the use of Glysters, sometimes cooling, and sometimes Purging are very beneficial in all Fevers; because they expell insensibly by degrees a great quantity of the Morbifick Cause by Stool, and besides wash the first Passages, that always furnish the Blood with bad Humours.

It remains now, to make an end of this Treatise, that we set down a Method of curing Intermittent Fevers; which, tho' it ought not to be the same with that of Continual Fevers, yet must, whether they be Quotidian, Tertian, Quartan, Quintan, Erratick, &c. be perform'd in a manner not very different from the other; especially since their Cause is most commonly the same, and only seems to differ, as to the greater or lesser quantity and exaltation. And first, as to the universal Remedies; Bleeding, tho' a prudent Physician may according to the Temperament, Age, and Constitution of the Patient prescribe it divers times, yet often repeated does more harm than good: but Purging now and then repeated seems to be more required, as well to cleanse the first Passages, which are always in fault, as to expel the *Heterogeneous* Particles from the Blood, and to correct the bad Disposition of the same. Emeticks and those strong ones, if the Patient can bear them, in the beginning are much more beneficial than Catharticks: the frequent use of Purging Glysters is recommended, as well in Continual as Intermittent Fevers. Yet as daily Experience teaches us, altering are of more virtue, than evacuating Remedies; and especially those that are bitter, and from thence call'd *Febrifuges*: Such are Wormwood, Germander, the lesser Centaury, boil'd in Water; as also their Salts, such are all Volatile and fix'd Salts, and Sudorificks; Jesuits-bark in Powder, or infused sometimes in Water, sometimes in White-wine; which now a-days is counted the best *Febrifugum*; a Dram or two likewise of Venice-Treacle, in a Decoction of Succory is reputed to be an excellent

excellent Remedy: Abstinence in Eating helps also very much: some recommend very much a Pilsane made of half an Ounce of Senna, two Pugils of the lesser Centory, a Dram and half of Salt of Wormwood; let them be boil'd in a pint of Spring-Water, and the Patient take a Cup of it every Morning, and even in the heat of the Paroxysm: All these Remedies, and innumerable others, which may be seen in the Authors, and I omit for brevity sake, are therefore counted to be Specificks, and Febrifugs, because with their saline Sulphur, with which they abound, or their Lixivious Salt, they are very fit to correct the Acidity of the Lympha, or the Redundancy of the crude Chalybeat Parts of the Blood; by reason of which the Blood shall be brought to that Disposition, that there shall not be so great an Heterogeneity between its Parts; and consequently the Æthereal Matter, which agitates and stirs its Parts preternaturally, shall not be suffer'd to enter in such quantities. In the mean time, because there is a fault in the Chylification, or the first Concoction in all Intermitting Fevers, it will not be amiss after Vomits to prescribe digestive Medicines, and to Corroborate the Stomach: as also, if there come various Symptoms to them, as Vomiting, immoderate Watchings, sleepy Distempers, &c. The Physician ought to attack them with their proper Remedies, related before, avoiding all things that are Acid and Cooling; for in the Intermitting Fevers they exasperate the Paroxysms; but if an Intermitting Fever be fomented by an Obstruction of the Viscera, you must intermix the aforesaid Remedies with such as are opening, which commonly prove beneficial.

I shall not be more copious about the Cure of Intermitting Fevers, because I only examine here Fevers in general; and many other Remedies, of which we make no mention here, may be found up and down in many Authors, whose Books are full of *Febrifuga*. As to the compound continual Fevers, or those, that besides their Continuity, have either Periodick, or uncertain Exasperations; in these besides the Remedies proper in Continual Fevers, Physicians are used to prescribe Jesuits-Bark in the Waters of Succory, or red

red Poppies; after the use of which the Patients commonly find great ease; especially if the universal and other peculiar Remedies have been used before.

*Note*, That two Drams of the Jesuits-Bark ought to be given in Succory, or Purslain-Water in Continual Fevers; but in Intermitting Fevers the same Quantity should be given in White-Wine, two or three Hours before the Fit.

*Note*, Likewise; That in the Paroxysms nothing is to be attempted, especially in those, that are weak and tender; yet to Robust and Rustick People Bleeding or Purging, and other Remedies might be prescribed, which often succeed well with them, especially in Intermitting Fevers.

Lastly, *Note*, in Intermitting Fevers, That after the taking of the two Drams of Jesuits-Bark, you must order another Dram of it for the next Morning, and another the Night following, that so the Morbifick Matter may be better, and more efficaciously fix'd: and that attenuating Volatile, and Sudorifick Medicines are of much greater virtue in Quartans and Quintans, where the Paroxysms are more lasting, and return more rarely.

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T R E A T I S E  
O F  
Venereal Diseases.

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C H A P. I.

*Of the P O X.*

**M**OST Authors are used to derive the Origin of the Pox from the Year 1464; at which time *Charles VIII. of France* was at War with *Alphonfus of Spain*; the Contagion being communicated by the *Spaniards* to the *French*, that besieged *Naples*. Some will have it, that the *Soldiers of Columbus* brought it among other Merchandises from *America*, and that first in *Spain*, and afterwards in *Italy* it was suddenly propagated with a great increase: But if the matter be more nearly examin'd, it will appear that the Pox has been known long before the time of *Columbus*: For *Moses* himself speaks in *Leviticus* of some Running of the Seed, and forbids them, that had it, as being polluted, to Eat with the rest. And in the First Book of the Histories of *Herodotus*, you may read, that the *Scythians*, for prophaning the *Ascalonian* Temple of *Venus Urania*, were afflicted with a Woman's Distemper; the Goddess thus revenging the Injury done her.

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I will not deny, that *Hippocrates* and *Galen* might have been ignorant of this Distemper; tho', that we meet every where in the Works of both, with most of its Symptoms, seems to confirm the contrary Opinion: For what else is the *Gonorrhæa*, of which they so frequently make mention? What mean those Ulcers, those sore and angry Pimples? Nothing but a Venereal Contagion; and we ought not to wonder more, that they seem not to have known, or at least past over in silence, this Distemper, than that they have not made mention in their Writings of the Small-Pox and Measles, than which nothing is more ancient, and common, or more frequently met with in the Books of Physick.

I confess, that by reason of the Licentiousness of the Soldiers, and the Lustfulness of the *Italian* Whores, that follow'd the Camp, this Contagion might have been very brief at the Siege of *Naples*: But that from thence it should have taken its rise in *Europe*, and been so suddenly communicated to *Asia*, and *Africa*, I cannot be persuaded to; especially, since *Salicetus*, *Gordonius*, and *Valereus*, very credible Authors; of which the first lived in 1270; the second in 1418, and the third between both; attest, that that Contagion proceeds from the Copulation of Men with Unclean Prostitutes. Nay, it is probable, that the Leprosie, so frequent in those ancient Times, whose Venom is now a-days cured with Mercury, was the real Off-spring of the Pox. Having explain'd the Birth of this Distemper, I shall proceed to the examination of its Nature and Species.

The Pox then may be defined, to be a Distemper, got by Contagion, infecting the Mass of Humours, and solid Parts, manifesting it self by red Spots, Tumours, Ulcers, and lastly by very acute Pains: it is contracted by Copulation with an infected Woman, by lying in the same Bed with one that has this Contagion, or any other manner of touching of them.

If it proceeds from Copulation, it exerts its Power first upon the Privy Parts, raising Ulcers, Bubo's, a *Gonorrhœa*, and the like in the same: If it be communicated to the Nurse by a Sucking Child, her Nipples will be full of Ulcers; and if it comes from her to the

Child; the same Ulcers shall be observed in the Mouth and Throat of the latter. If any one uses the Cup, or Spoon, that the infected has a little before had at his Mouth, the Ulcers shall come to his Palate, Mouth, Tongue and Throat.

The Cause of this Evil consists in some Ferment, that dissolves the Humours, and corrôdes the Members; this Venom after it has lain as it were dormant for a time, discovers at last its Cruelty, by Ulcers, Inflammations, Tumours and Pimples, that infest the Part affected.

There are many Signs, by which this skulking Poison is detected; as for example, if the Privy Parts be ulcerated, there is a Gonorrhœa, with other such Symptoms, as pains in the Limbs and Joints, that increase toward Night; if there be a continual Head-ach; if the Mouth, Palate and Throat be full of Ulcers; if the Fundament be every where infested with Cancers; if the Cods and other Parts be inflamed, there is no room left to doubt, but they have the Pox; which you may call then inveterate, and confirm'd, when some Nodes like Pellets stick out upon the Bones.

This Distemper is thought difficult to be known, when but few of the said Symptoms appear; but far more difficult, when it imitates the Symptoms of other Distempers; as when there are Ophthalmies, Blindness, Deafness, Ringing in the Ears, a Verrigo; then some expert Physician ought to be consulted, that may discover the Distemper, examine the Patient about past Diseases, whether he has had a Gonorrhœa, Bubo, &c. and what Remedies he has used: Thus a skilful Physician shall find out where the cunning Enemy lurks, and not throw uncertain Darts.

From what has been said it is manifest, that the Pox is not one Distemper, but several Evils together, that leave no part of the Body untouch'd, and no Action undisturb'd.

Against such a cruel Enemy Physick ought to plant all its heavy Artillery; partly to extinguish all the Venom in the Vessels, Viscera, and solid Parts; partly that the Parts weaken'd by it may be strengthened, and therefore Diet, Surgery, and Pharmacy ought with joint forces to attack them.

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As for Diet, chuse the most temperate Air, that the Venom may exhale the easier, let his Victuals be cooling and moist, to dilute the Viscous Humour of the Venom; and therefore the use of Broth is not to be prohibited, but allowed twice a Day, cooling Herbs being boiled in it. Give the Patient for his ordinary Drink a Decoction of Guajacum, Sassa-paril, &c. whose power not only chases the thinnest and most volatile Part of the Morbifick Matter; but by its penetrating Faculty dissolves, and tempers likewise the glutinous fix'd Parts.

If there be a Fever, and the Body is very dry, it is proper to give him before, and at Meals Barley-Broth; let the Patient sleep moderately, use gentle and convenient Exercise; such as Hunting, and playing at Tennis; by which the stagnating Matter excited and attenuated, may be thrust to the Circumference of the Body. Let him altogether abstain from Venery; for by Copulation the Parts that belong to Generation are exasperated, the Strength is lost, and all the Limbs are weakned.

If the Body be Costive, it must be open'd by Glysters of Emollient Herbs, and a Laxative Pilsane: let the Patient fly Anger, that disturbs and inflames the Humours; he ought with the like care to shun Grief and Sorrow, that the Morbifick Matter may not be more fix'd, and penetrate the deeper.

Let Surgery and Pharmacy act with joint forces; First let Blood, that the Veins being emptied, the Patient may be more fit to bear the violence of the Mercury; the Body being first soften'd with a Laxative Glyster, of which this is the Description.

*Take of the Leaves of Mallows, Violets, and Borrage each a handful; of the four greater cold Seeds bruised an Ounce; of Bran a Pugil; boil them in Water, till a pint be boiled away; and in the strained Liquor dissolve of the best Catholicon one Ounce, of Honey of Violets two Ounces. Make a Glyster to be injected at leisure.*



After Bleeding cleanse the Guts with the following  
Pistane and Bolus.

*Take of Tamarinds six Drams, pick'd Senna half an Ounce, some slices of a Lemon, or a Dram of Sal-Prunell, of red Roses one Pugil; infuse them in a sufficient quantity of Spring-Water cold over Night for two draughts; strain it, and give him about half, about six in the Morning, and the rest two hours after: which continue for two Days.*

Or,

*Take of Cassia newly drawn six Drams, of Confection of Hammech three Drams, Mercurius Dulcis a Scruple, Cremor Tartar a Dram; make a Bolus, which let the Patient take in the Morning, and repeat the day following.*

The Body being thus Purged, Bleed in the Left-Arm, if the Patient be but Strong and Plethorick enough.

After that let the Patient use a Bath of luke-warm Water, for Eight or Ten Days, Mornings and Evenings, staying in it half an Hour, or an Hour every time.

If his Strength will not permit it, let him sit in a Bathing-Tub Twelve, or Sixteen Days, with an Intermission of Two, or Three Days, every Fifth or Sixth Day; let him take in the Bath, or Bathing-Tub, a Decoction of cooling Herbs, a pint of Goats-Milk, or a draught of Barley-Broath, with Syrup of Maiden-Hair; if he be Plethorick, take away Eight Ounces of Blood, out of both Ancles, whilst he is a bathing. Some after Bathing count nothing better, than to provoke Sweats, putting the Patient in a Sweating-Stool, where they burn Spirit of Wine, giving him first a Dose of Sassa-patil, and Guajacum; which Method does nothing else, but separate the thin Parts of the Humour from the gross ones, which become so fix'd, that they yield not even to Mercury it self; wherefore I approve not of this way, as being pernicious to the Patient; and Mercury being the only Specifick to cure the Venereal Disease, nothing ought to be prescribed but what prepares the Body for it, by opening the Pores, by Diluting,

luting, Attenuating, and Mollifying that part of the Blood, which is thick, dry and full of Corroding Juices; that at last by Spitting, all the Venom may be expell'd: Between the Bathing and Purging let him take this Decoction.

*Take of Salsa-paril cut small an Ounce, of rasp'd Guajacum half an Ounce; infuse it in four Pints of Spring-Water twelve Hours over hot Embers; boil a fourth part of it away, and let him have it for his ordinary Drink without Wine.*

The Patient being thus prepared by Bleeding, Purging and Bathing, proceed to the use of Mercury, which is the only Remedy that can extirpate the Distemper: for Diaphoreticks, as Guajacum, and Salsa-paril, are able 'tis true to lessen the Distemper, but not to cure it; with these the Cure may begin, but cannot be finish'd by them; for a little after the Venom, come to Life again, brings back the Symptoms that were lull'd asleep, and renews the same Tragedy; so that a perfect Cure is only contain'd in a due administration of Mercury.

But the Mercury is made use of several ways: Some rub the Parts with a Mercurial Ointment; others apply a Plaister made with Mercury; some to provoke Salivation give *Mercurius Præcipitatus*, both red and white: Yet I am of Opinion, that nothing exceeds Anointings, or helps more the penetrating Virtue, with which the Mercury is endued; they are made of Neapolitan Ointment, which is here prescribed.

*Take of Quick-silver squeez'd through Leather a pound; of Venice Turpentine three Drams; rub them together for some Hours in a Brass Mortar, till the Quick-silver is quite kill'd; mix by little at a time two Pound of Hogs-Lard with it, and make an Ointment.*

With this anoint the whole Body from the Soles of the Feet to the Hair of the Head; all but the Breast and Belly, in regard of the Parts contain'd within; which Uction, that it may be successful, must be done

before a clear Fire, if the Patient's Strength will bear it, otherwise in the Bed. Each Uction requires five or six Ounces of the Ointment; for those, that are more tender, four Ounces may suffice; the Soles of the Feet, Knees, Thighs, Buttocks, and Arms being only anointed. The Uction must be repeated several times once a Day, either in the Morning fasting, or in the Evening two Hours before Supper.

If after the third Uction no sign of Salivation appear yet, the Patient is to be anointed twice a Day, if his Strength will bear it, or once augmenting the Dose of the Ointment.

Observe that you must leave off with the seventh, or eighth Uction; as also, as soon as any Signs of Salivation appear; which are known by this; the Head akes, the Face looks red, the Throat grows rough, Ulcers break out in the Mouth, and the Patient Spits much and often; some Days after the whole Mouth is full of Ulcers, the Patient speaks thick, the Palate and Tongue burn, in which, if they are not often wash'd with warm Milk, they feel very acute Pains, and thus the Fluxing continues without Intermission with a nauseous Stink; if the Spittle flows in such a quantity, that you fear a Suffocation; to free the Patient from the imminent danger, let him be Blooded twice, or three times, and give him a Laxative Pilsane every other Day.

It happens sometimes, that after the second or third Uction the Patient is strangely Gripped, which retards the Salivation; then give him every Day, three or four Glysters, sometimes of Milk with rosated Sugar, and Yolks of Eggs, sometimes of Milk alone; during the Salivation, or in the declination of it the Body ought to be open.

To wash the Ulcers of the Mouth use the following Gargarism.

*Take of whole Barley one Pugil, Liquorice, and stoned Raisins each six Drams, red Roses one Pugil; boil them in eight Ounces of the strain'd Liquor; dissolve two Ounces of Honey of Roses; make a Gargarism: with this let the Patient wash his Mouth frequently:*

or

or else order *Wine* tempered with *Water* for the same use; which, if the Patient can bear it, is much better.

As long as the Flux lasts let him Drink the above-mention'd Decoction of *Sassa-paril*, unless he feels too much heat; in which case it is much better to prescribe a moistning and cooling Decoction. To some, after a due administration of Remedies, you must prescribe *Asses Milk*, that they may quite recover their Health.

If the Poison be deeper rooted in, it happens often, that some Swellings attended with Rottenness, and violent Pain remain upon the Bones; then laying the Bone open the Rottenness is to be taken away by cutting or burning; and the Part by a due Administration of Remedies restored to its former state.

If the *Uctions* being duly performed, the Salivation is not promoted yet, and no hope of a Flux appears; let the Patient be put to Bed, and remain there for a Week, to rest, and refresh himself; then Bleed him again, prescribe a Purge, and order Bathing: After which dismiss the Patient, and doubt not of his Health; for many have been this way perfectly cured.

For the Mercury expells this Distemper not only by Salivation, but sometimes also by Stool, and sometimes by Transpiration only, without any sensible Evacuation of the Humours.

But that the Patients may live afterwards with greater assurance, let them Drink for 20 Days a Decoction of Antimony, and *Sassa-paril*, or take the Neapolitan Opiar of *Rhodius*: lastly the hot Mineral-Waters are of wonderful effect here.

In those, that have Ulcers in the Throat, or Tonfills, the Cure succeeds not so well without Salivation; because it is hardly possible that they should yield to any other Remedies, unless they be conquer'd perhaps by a Decoction of Antimony, and *Sassa-paril*; let them be purged every fourth Day with an Infusion of *Senna*, adding prepared Stybium, if you would stir them more. In the mean time apply Spirit of Vitriol, or Sulphur, or Sublimate-Water to the Ulcers of the Throat and Tonfills;



Tonfills; let the Mouth and Throat be frequently wash'd with Barley-broth, adding a fourth part of the Collyrium of *Lanfrancus*, or Water of unslack'd Lime.

Those that provoke Fluxing with Plaisters, use the Plaister of the Spawn of Frogs, with a Quadruple Portion of Mercury; with the said Plaister they dress the Soles of the Feet, Legs, Thighs, Loins, Back, Shoulders, Neck and Arms; then put the Patient to Bed, and expect the Signs of Salivation; if none appear, it is proper to use some Unctions, and renew the Plaisters.

They that cure this Distemper with a Fumigation of Mercury, throw half an Ounce, or six Drams of Quick-silver in a red hot Crucible, standing upon Coals, over which the Patient sits in a Seat without a bottom; or else he is put into a Tabernacle, to receive the Steam; wrapping Linnen, or Cloth close about his Neck, that the Steam may not reach up to his Head: thus the Patient remains till all the Quick-silver is exhaled. Others make Tablets of Quick-silver, kill'd with Turpentine, distill'd Vinegar, Bole-Armoniack, and powder'd Charcoal; of this they make a Mass, which extended upon Paper they dry in the Shade, keeping this Proportion, that the Mercury is a third part of the Tablets; of these they strew by little at a time an Ounce and a half, or two Ounces upon hot Coals, or they put it in a red hot Crucible, and let the Patient receive the Steam; this Fumigation is perform'd once or twice a Day, and continued till the Salivation begins.

The last Method of curing the Pox is with white, or red Precipitate; of which they give twelve, or fifteen Grains; which is continued for six, eight, or twelve Days, till they Flux copiously. If the Salivation proceeds slowly, to hasten it you may add six, or at most ten Grains of red Precipitate to the Dose. But let every prudent Physician abhor this Method; for this way the Venom cannot be extirpated: For this Remedy raises only very small Ulcers in the Mouth; that are only fit, to let out the thinnest Particles of the Venom; the thicker Part, and Faces remain, and cannot be forced to the Throat from so small a quantity of Mercury. Besides that this Remedy is unable to destroy the Venom, which the Unctions perform to a wonder.

## C H A P. II.

*Of a virulent Gonorrhœa, or Heat of Urine.*

**T**HIS Distemper is defined to be an involuntary running of Purulent and nasty Seed, attended with Pain, Heat of Urine, and a troublesome Erection, proceeding from an Inflammation of the *Prostata*; because the Parts, that belong to Generation, heated and rarified in Copulation, are easily imbued with the Venereal Venom.

The Inflammation of the *Prostata* has its Origin in a Gonorrhœa from a sharp and malignant Vapour, that during Copulation penetrates thither, by its Acrimony inflames the Seed, and by setting it in a Ferment corrupts it: then these Glandules begin to swell, to be inflamed, and come to an Abscess; which, whilst it suppurates, emits a Purulent and sordid Matter according to the different Figure of the Parts that constitute the Venom, sometimes Yellow, sometimes Green; hence come the Ulcers of the *Urethra*, the Heat of Urine, Caruncula's, and Inflammation.

A Gonorrhœa shews it self not presently; in some it is three, or four; in others ten, and in others fifteen Days before it appears, and seldom manifests its self the same Day it is communicated.

When this Distemper is felt, First the Urine is very high coloured; the head of the Yard is inflamed, and polluted with a foul and whitish Humour, running more copiously every Day, and biting very sharply: This Humour from Whitish turns Yellow, and Greenish, and causes a troublesome Erection, which torments them most in the Night time: This Erection is sometimes so violent, cruel, and troublesome, that the Yard is incurvated; its Ligaments and Muscles being inflamed; and then it becomes to be a Gonorrhœa of the worst sort, which they call a Corde:

In the Cure of a Gonorrhœa, which is nothing else, but an Inflammation of the *Prostata*, and adjacent Parts, caused by a Venereal Venom; a Revulsion is to be made, and Evacuating and Lenitive Remedies, and such as destroy the Venereal Venom are to be used. First let the Patient be Bled, that the Blood may not press so hard upon the *Prostata*, and to assuage the Inflammation; Nay if there happens to be a *Plethora*, Bleeding must be ordered two or three times: The Revulsion of the Humours being thus duly made, let the *Saphena* be opened in the Ankle, which corresponds with the Part affected, without fear that Bleeding might draw the Venom inwardly; for it will draw the Humour from the affected Parts, open the Morbifick Matter a more free passage to get out: Before Bleeding give a Laxative Glyster.

Neither ought Cooling, and Lenitive Emulsions, or Juleps to be omitted, by which the Acrimony of the Humours is tempered, the Rumping stoppt, the Venom destroy'd, and lastly the Heat of Urine mitigated. Therefore,

Take of sweet Almonds blanch'd twelve, of the four cold Seeds one Ounce, of white Poppy-Seed two Drams; bruise them, pouring to them a Pint and a half of Spring-Water; make an Emulsion for three Doses; let him take it Mornings and Evenings; adding to every Dose six Drams of Syrup of Maiden-Hair, and one Dram of Sal-prunel.

Or,

Take of the Roots of Water-Lillies, Strawberries, each two Ounces; of the Leaves of Dandelion with the whole Agrimony, Maiden-Hair, Lettice, each a handful; of the Seeds of Melon half an Ounce, of white Poppies two Drams; boil them to a Pint and a half; make a Julep for three Doses, adding to every Dose six Drams of Syrup of Violets, of Sal-prunel one Dram.

The third Day when the Inflammation by the Bleeding, and above-mentioned Lenitives is mitigated; to Evacuate the *Cacochymy*, which feeds the Venereal Contagion, prescribe the following Cathartick.

*Take of Cassia newly extracted an Ounce and a half, of Confection of Hamech three Drams, of Mercurius Dulcis one Scruple, of Cremor-Tartar one Dram; mix, and make Bolusses, to be taken in the Morning.*

If the Patient hates a Bolus give this Liquid.

*Take of pick'd Senna three Drams, Tamarinds six Drams, Cremor-Tartar one Dram; boil them to six Ounces, infuse of Cassia one Ounce; in the strained Liquor dissolve of Syrup of Roses Solutive an Ounce; make a Potion to be taken in the Morning; the Patient keeping his Chamber.*

Give first a Scruple of *Mercurius-dulcis* in Conserve of Roses, or the Pulp of a roasted Apple. If a Potion be unpleasant to the Patient, prescribe instead of it the following Pills.

*Take of the Pills Sine-quibus one Dram, Mercurius dulcis a Scruple; make four or five Pills, to be taken in the Morning; if they are not strong enough add six or eight Grains of white Precipitate; the Body being Purged open the Saphena, to divert the Humour; afterwards repeat the Potion again, for two or three Days, to hinder the Influx of the Venereal Ferment that increases daily.*

Whilst you Purge give an Emulsion about Bed-time; if he be much troubled with the Erection, especially a Nights, when he is a Bed, let the Part be fomented with lukewarm Milk, or an Emollient Decoction; after which, that the Vdnom may not shute further, and produce the Pox, Evacuate the Relicks with the following Decoction.

*Take*



Take of Antimony bruised a little, and tied up, six Ounces; of Sassa-paril cut small, four Ounces, Guaiacum one Ounce, Walnut-Shells two Ounces; infuse them 24 Hours over hot Embers in 12 Pints of Spring-Water; boil half away; of the strained Liquor let the Patient take three draughts a Day; the first three Hours before Dinner; the second three Hours after Dinner, and the third at Bed-time; for 20 or 25 Days: boil the remainder in six Quarts of Spring-Water to halves, and let him drink this for his ordinary Drink, abstaining from Wine.

At the same time he must be purged with Mercurial Pills, that destroy the Venereal Venom to a wonder.

Take of Quick-silver kill'd with Turpentine an Ounce and a half, Conserve of Roses an Ounce, pick'd Senna, Rhubarb, Falap powder'd each two Drams; of Scammony prepared with Sulphur half an Ounce; of Cinamon a Scruple: with Oxymel make a Mass of Pills; the Dose is a Dram every fourth Day.

Then put the Patient in a Bathing-Tub of Spring or River Water, to mitigate the heat of the Humours, and remove the *Empyreuma*, left by the Venereal Venom in the Genital Parts; if by this bathing some Sordid and Viscous Humour runs out at the Yard, make use of cleansing and drying Injections. Yet these Injections are pernicious in the beginning of the Distemper; and only produce more troublesome Symptoms, as an Inflammation of the Testicles, &c:

Take of crude Antimony bruised a little, and tied up, four Ounces; Sassa-paril an Ounce and a half, round Birthwort three Drams, the tops of St. John's-wort, red Roses each a Pugil; boil them to a Pint: In the strained Liquor dissolve of Honey of Roses two Ounces; these Injections are to be given twice a Day.

But

But if they cause Pain, forbear, and instead of them prescribe the following.

*Take of whole Barley one Pugil, Red-Roses, the tops of St. John's-wort, each two Pugils; boil them to a Pint; in the strained Liquor dissolve of Honey of Roses two Ounces; make an Injection.*

If there be a purulent Ulcer, add to the Injection two Ounces of the Water of unslack'd Lime.

Note, That you might not rely too much upon these Injections, which, tho' they cleanse the *Urethra*, yet never touch the *Prostata*, where the Seat of the Distemper is.

These things being perform'd, that nothing may remain lurking behind, let him use the Vitriolated, and Chalybeat Waters; such as those of *Meynes* and *Camarais*; by which internal Ulcers, from what Cause soever proceeding, are healed to a wonder.

A Gonorrhœa is sometimes attended likewise with a Swelling and Inflammation of the Testicles, caused by unseasonable Injections, adding some violent Exercise, the neglect of Bleeding, or any other Error; so that if care be not taken in a short time it will suppurate: then let Blood in either Arm two or three times, as it is usual in the Cure of an Inflammation; and to the Part affected apply this Cataplasm.

*Take of Bean-flower one pound, boil it in Oxymel, and make a Cataplasm to be laid to the Part: if the Pain be violent, order the following Cataplasm.*

*Take of Bread soak'd, and boiled in eight Ounces of Goats-Milk; Oil of Roses two Ounces, two Yolks of Eggs, of Saffron a Scruple: Make a Cataplasm, to be applied to the Part affected, and renewed sometimes.*

The Pain and Inflammation being taken off, the Swelling must be resolved with a Plaister of the Spawn of Frogs, with a Quadruple Portion of Mercury; this Plaister tied to a Girdle is to be wore a Month, or two; for the Swelling is not easily discuss'd; there commonly remains a little Swelling, about the bigness of a small Pea in the Testicles, that is removed by a Fumigation of Mercury, or Cinnabar; in the mean time the Purges, Decoctions, and Pills and other Remedies are not to be omitted.

### C H A P. III.

#### *Of a Venereal Bubo.*

A Venereal Bubo is a Tumour in the Glandules of the Groins, proceeding from a Virulent and Putrifying Humour; which the Patient has contracted in Copulation; for the Venereal Venom penetrating the descending *Aorta* infects the Blood, that, laying down its filth in the Groins, produces hard, and red Swellings.

A Venereal is distinguish'd from a Pestilential Bubo, by that the latter has also other Symptoms of the Plague that attend it; from a Simple and common Bubo, by that no Copulation precedes it, and that there is no Suspicion of a Venereal Disease; besides a Venereal Bubo has either a Gonorrhœa, or Ulcerated Privities for Companions.

That this may be perfectly cured, the Suppuration is to be ripen'd by attracting, and emollient Remedies; and, whatever is corrupt in the Parts, is to be taken away. First apply to the Part affected a Plaister of Galbanum, dissolv'd in Wine: if the Patient refuses to wear this Plaister, by reason of the Stink, order this Cataplasim instead of it.

*Take*

*Take of the Roots of Marsh-Mallows, and white Lillies each an Ounce and a half; of the Leaves of Mallows, Lillies, Pellitory, Bearfoot, each a handful; boil, and strain them, to the strained Pulp add two Onions, boiled and beaten; and with Oil of Lillies make a Cataplasme, to be applied to the Part, and renewed twice a Day Mornings and Evenings.*

In the mean time Bleed in the Arm of the Side of the Bubo, that the Blood may more easily flow to the Suppuration, apply Cupping-Glasses without Scarification to the Tumour. By which Remedies every Day renew'd if the Bubo fills not, so the Matter is but well digested, open it with a Corrosive or Burning; then put in a Tent with some Digestive, which must keep it open, till the Matter is ripe and dropt out; the Suppuration may be ripen'd also by a Plaister of Diachylon Cum Gummi.

The Bubo being open'd, and the Matter running, let the Body be purged with the Bolus, Pills, or Potion described in the foregoing Chapter. After which to draw out what Venom may be left, give the first, or second Decoction of Antimony, with the Mercurial Pills, as we have prescribed them; if, after the Bubo is cicatrized, there remains a Swelling it is a sign of some skulking Venom, and therefore hasten to the use of Mercury. It happens often, that the Hardness of a Bubo is not to be mollified by any Remedies, and imitates a Scirrhus Tumour; then Mercury is required. Some open hard and unripe Bubo's with putrifying Ointments, but this Method seldom succeeds well.



## C H A P. IV.

*Of Ulcers, or Shankers, growing upon the Yard.*

SHANKERS are called these little Ulcers, that proceeding from a Venereal Cause, are bred upon the Yard from a foul and corrupt Humour, that by the help of Matter, and Sperm, sticks to it in Copulation, and in a Day or two breeds an Ulcer; sometimes these little Ulcers are not observed before the Tenth, sometimes the Twentieth Day; sometimes they are Signs of an imminent Pox. The longer the Venom is hid, by degrees corroding the Parts, the sooner it gets within, and produces at the end of the Yard, or upon the Præputium it self little Ulcers; which are worse, the more those Parts abound with little Veins and Arteries, and the more they are stuffed up with Escars.

That the Cure be duly perform'd, the Poison hid in the Yard must be fetch'd out, if any be in the Body it is to be expell'd or kill'd; and the Ulcers after Suppuration are to be dried.

First apply red Precipitate to them, mix'd with Basilicon and spread on Linnen or Lint: This way the Venom will be kill'd, and by Suppuration carried away easily. I can but detest the Method of those, that put *Aqua-Fortis*, Spirit of Vitriol, and the second Water to these Ulcers; because this way they make an Escar Ten times more troublesome than the Ulcers; and strike in the Venom, with which in a short time the whole Body is infested.

It is not enough only to cure the Ulcers; Care must be taken likewise of the other Parts; that they may be defended from the Pox. Here Purging is proper, as it was order'd in the Gonorrhœa, with the Decoction of Antimony, continued for some time, or the Neapolitan Opiat of *Renodæus*.

After

After the Ulcers are Suppurated enough, you may cleanse, and dry them with the following Ointment.

*Take of Quick-silver killed with Turpentine ; of cleansing Ointment each an Ounce and a half ; mix them in a Brass Mortar ; make an Ointment, and keep it for use ; if after the Ulcer is heal'd up a hardness remains, it is a sign of some skulking Venom ; then take recourse to Mercury, which is to be done, tho' the Ulcers return some Months or Years after.*

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## CHAP. V.

### *Of Warts, or Porri.*

**T**HE Warts, or *Porri*, that are used to grow after Copulation upon the Glans, and other part of the Yard, proceed from the viscous, and purulent Blood, putrified in the Parts, or brought thither through the Vessels. In the Cure of them the following Powder is of use.

*Take of red Precipitate half an Ounce ; burnt Alom, and Savin each Fifteen Grains, mix and make a Powder to strew upon them.*

For tender People mix some Digestive Ointment, or Pomatum with the Powder ; to make it work more gently.

In the mean time neglect not the Purges, Digestive Decoctions, Neapolitan Opiat, and the like Remedies ; if these Warts come often and many, it is a Sign of the Pox ; and they must be cured as such.

## The Collyrium of Lanfrancus.

Take of White-Wine, and Rose-Water, each half a Pint; of Auripigment, Myrrhe, and Aloes, each two Drams, of Copperice half a Dram; make a Collyrium to wash Ulcers, and for Injections in a Gonorrhœa.

## The Neapolitan Opiat of Renodent.

Take of the Leaves of Oriental Senna an Ounce and a half; of Hermodactyls, Turbit six Drams; Guajacum, Salsaparill, and Sassafras, each half an Ounce; of the best Honey clarified in a Decoction of China Roots, and boiled till the Water be consumed, one Pound; make an Opiat: it is given every other Day, and often every Day in the Morning fasting; the Dose is two Drams, or half an Ounce.

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THE  
SECRETS  
OF  
*Lazarus Riverius,*  
Counsellor and Physician  
TO THE  
FRENCH KING,  
AND,  
Professor in the University of *Montpellier.*  
Never Publish'd before.

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*Our Tincture of Gold.*

SINCE many Receipts of *Aurum Potabile*, which by some are call'd Essences of Gold, are made publick, I have a mind likewise to describe this way of preparing it, as being one of those things, to which I have always trusted, led by the Example not only of my Learn'd Master, but also of *Petrus Joan. Faber*, under whose Discipline I have first learned Chymical Preparations, and many of his precious Secrets.



Others dissolve Gold without any previous Preparation ; but this is our Method.

*Take the purest Gold, and Calcine it thrte times with Antimony, always adding Crude Antimony ; then separate it from the Ashes, which will easily be known, and mundify'd dissolve it in Aqua Regia ; when it is dissolved sprinkle it with Oil of Tartar, per deliquium by drops ; and the Gold shall be precipitated to the bottom ; then the Water being poured off by decantation wash it in many Waters, till the Acrimony be taken away, then dry it in the Sun, or over warm Embers, but take care of the Fire, for it is Gold of the fulmipant kind : Then dissolve the Powder in our Spirit of Salt, or in our Spirit of Vitriol, setting it in a warm place for a Month : By that time it will communicate all its Tincture to the Spirits ; then pour off the first, and add new Spirit, as long as it colours it ; and add to every Ounce of the coloured Spirit a Dram of dissolved volatile Salt of Tartar, leaving it in a warm Digestion for 15 Days ; then put all again to the Powder, which remain'd at the bottom of the Vessel, and set it in a Glass-House-Furnace for 60 Days ; increasing the heat by degrees ; for in 15 Days all will be peutrify'd ; two Months after, as is said, let it stand in a moist place, as it is usual, till all is dissolv'd, and this is our Aurum Potabile.*

This is a Secret, which in Virtue exceeds all others ; for it strengthens the Heart, the Brain, the Liver, and all the Parts of our Body ; but especially those, whose business it is to attract, alter, nourish, separate, expel, and the like ; this is counted to be the true Balsam of Life ; this preserves Youth, increases the Spirits, keeps back old Age, and prevents the Humours from corrupting one another ; it is proper in all kind of Distempers, by virtue partly of the Gold, partly of the fix'd Salts, that dissolve the impurities of the Bodies by transpiration : It is given in all manner of Liquors, from five to eight Drops at a time.

*Our Tincture of Silver.*

Having treated of Gold, which claims the first place in price, I proceed to the Tincture of Silver, as deserving the next place, not only in price, but likewise in Virtues.

*Take of the best refined Silver, dissolve it in Aqua Fortis, make it precipitate with Oil of Tartar; after you have wash'd it, dry it, and with the above-named Liquors draw a Tincture out of it in the same manner, as is said of the Gold, and lastly dissolve it, as above.*

The Virtues of this are innumerable, especially in capital Diseases; for it is beneficial in an Epilepsie, tho' never so inveterate, Vertigo, Hemicrane, Palsie, and other Distempers, that proceed from faults of the Brain; for as in the Macrocolm Silver is call'd the Brain of the World, so is likewise this Tincture a true and potent remedy in all capital Diseases; it is of wonderful use to Hectick People, as also to those, that are Phthical, if given with other Specificks: especially the above-mentioned *Aurum Potabile*; it is taken in proper Waters, as in an Epilepsie in the Water of Swallows, &c.

*Our Tincture of Tin.*

Many have writ of Tin; but few have managed it rightly; nay instead of Salt of Tin, they get Salt of Lead, as appears in most of the Modern Professors, that are not able to fetch any substance out of Tin. The Tincture is made as follows.

*Take fine Tin without Lead, and Calcine it in an Iron Vessel, stirring it continually with a Spatula, till it is pulverized; afterwards whiten it by Cementation, and then let it stand a Month in a Glass-House-Furnace, or in a Reverberating Fire for seven Days; then digest it in a slow heat with distill'd Vinegar,*

pour off the green Tincture which it yields; this being taken away, put the Vinegar to the Calcined Tin, Still it seven times in a luted Retort; and always adding new distilled Vinegar, digest what is distilled with the same Calx in a warm place for many Days; then filere it, and Still it till it is dry. Adding Spirit of Wine well rectified, and Alkalized to the fixed Tin, dissolve the Tincture, for you must add so much of the Spirit as will dissolve the fix'd Tin: digest it for eight Days, for then the Spirit being separated the Tincture will remain at the bottom, which is an admirable Remedy.

You will find but few Receipts so sincere, and clear as these; for here is nothing set down, but what in several Processes I have seen my self.

This Tincture is of wonderful Effect in all kind of Distempers; inwardly taken it is a sovereign Remedy in all Uterine Distempers how raging soever; for it comforts and strengthens the Womb, and mundifies it from impure and corrupt Seeds, whence so many Evils proceed; it likewise helps the Brain, the Bowels, the Hypochondria, and join'd with Specificks it is of great Virtue in Hectick and Phthysical People. Externally applied it curbs all Acrimony, and Mordacity of external Distempers, Dulcifies, and perfectly Cures the same: It is given in a Liquid, from a Scruple to half a Dram for a Dose.

#### *Our Tincture, or Essence of Mars*

There are abundance of Remedies prepared of Iron, tho' this Tincture is not in use by many, yet it is one of the most precious, but the most laborious of all others.

Take the Filings of Iron, and being made red hot in a Crucible, quench it with distill'd Vinegar, let it boil in the same, and filtre it hot: Dry the Filing, and being made red hot, put distill'd Vinegar to it as before, let it boil again, and strain it: which rule when you shall have followed three times, distil the strain'd

*Strain'd Vinegar, till it is dry, and add Spirit of Wine; for the rest observe the same in order as in Tin.*

This is Cordial, Adstringent, and opens Obstructions: For, above all other Remedies, it is proper in Bloody-Fluxes, Loosnesses, Lienteries, immoderate Fluxes, Menstrual, and White, Gonorrhœa's, Spitting of Blood, Hemorrhagies of the Nose, and all sudden Fluxes of the Body whatever; it keeps all Wounds from Corruption, and heals them in a short time, it Mundifies, cleanses and dries Ulcers and Sores; it is given from a Scruple to half a Dram, in Specifick Cordials.

In the same manner make the Tinctures of Hematits, Dragons Blood, and the like; which are Remedies that work for the Blood.

#### *Our Essence of Mercury.*

Take Mercury, and sublimate it, as is usual three times, with Vitriol and Nitre; separate the purest Crystal-line part from the other; which, after you shall have sublimated it again seven times with well Decrepitated white Salt, rubb'd very well, put it in a Glass Vessel with Spirit of Salt, at the eminency of six Inches; digest it aside in a bath for Forty Days; then pour off the Spirit, and new being added, digest it Forty Days more; then pour it off as before; and, if all the Sublimate be not dissolved, you must infuse it and digest it afresh, till nothing remains at bottom. Put all the digested Spirits in a well luted Retort, and with a Receiver distill it, till white drops ascend; then take it off, and make four Cohobations of the Spirit with the same Caput Mortuum, making at last a violent Fire, till it is dry. What remains fix'd at the bottom calcine, till it becomes white, and make a Salt in the usual manner; distill the Spirit and separate it, as long as there is any Tincture left at bottom; this you shall join with its Salt in a slow heat till they become one; afterwards dulcifie it with Spirit of Wine; digest it in the same, then pour it off; do this five times, till it is dulcified.

This



This is a troubleſom Proceſs; but it eradicates Diſtempers, that are counted incurable: For it may be given to all Bodies of both Sexes and all Ages, in all manner of Diſtempers; it mundifies all ſorts of corrupt Diſtempers, that breed Malignities in any Parts of the Body, it works without any Irritation, Damage, or hindrance of buſineſs; it preſerves, and fomentſ the Baſam of Life, expells the Impurities by Tranſpiration, it dries and conſumes all Catarrhs whatever; it cures Obſtructions, and Cachexies, proceeding from bad Humours of the Hypochondria, the Womb, or corrupt Blood; it is good in the Hyſterick paſſion from a hot as well as a cold Cauſe, by ſtrengthening the Liver and Bowels; it draws out all Infections of the Pox, new or old; all Scirrhus, Strumous, and other obſtinate Swellings it Exulcerates and Cures. It is given in Broth, the Yolks of Eggs, or Wine, from Eight Drops to Ten in the Morning faſting.

*Our Eſſence, or Tincture of Coral.*

There is a vaſt number of Receipts, that teach how to draw a Tincture out of Coral, and how to make its Salt, but they are for the greateſt part deceitful; and, inſtead of Tincture of Coral, you get by the force of the Bath a Tincture of the Ingredients, with which they order you to mix it. Ours is this, which is ſincere, whenever well managed by a good Operator.

*Take Coral rubb'd very fine, and in a Glaſs Veſſel, put to it Vinegar, that has drawn a Tincture out of Antimony, and is ſeparated from it by diſtillation; for this is the fitteſt for Coral, Crab's Eyes, Lapis Hæmatites, Bole-Armoniack, Egg-shells, and the like: Let the Vinegar ſtand above it ſix Fingers breadth in a hot bath for ſome Days, and the Coral will be diſſolved; then diſtil the Vinegar till all is dry. Waſh the Powder ten or twelve times in Cordial-Waters, till all the Acrimony with the groſs and earthly Parts are gone; and it is dulcified, and clear like Cryſtal. Then ſet it by to be taken as ſhall be order'd. Take other Coral, mix it with the like quantity of Sal-Armoniack,*

*moniack, sublimate them in a proper Vessel; for the Salt will attract all the redness of the Coral, put the red sublimated Salt in Rectified and Alcalized Spirit of Wine, and in a hot Bath in few Days the Spirit will attract all the Tincture; separate the Spirit by distillation, and the Essence will remain; to which add the abovemention'd fix'd Powder, and this is the Essence of Coral.*

It is Cordial, and mundifies the Blood, as appears in Lepers, it may be given to any body in any Distemper; it is proper in all Fluxes, as is said, of the Essence of Mercury; it comforts the Heart, and Stomach, restores the natural Heat, and fortifies the Radical Moisture, it dissolves congealed Blood, and is good in Venomous Wounds, and Malignant, and Sordid Ulcers. It is given from half a Dram to a whole Dram in Broth, the Yolk of an Egg, Plantain-Water, &c.

*Our Essence of Pearls.*

Our Essence of Pearls differs somewhat from the Prescriptions of others, and is as follows.

*Digest Pearls in the above-mention'd Vinegar of Antimony; and they'll be quickly dissolv'd; do with them afterwards as with the Coral, till the Salt grows white, take off the Acrimony by several washings, then dissolve it in Alcalized Spirit of Wine, and by distillation draw it off seven times from the same Caput Mortuum; afterwards separate the Spirit, and the Essence will remain, as in the others.*

It is a most perfect Cordial, not at all inferiour to the *Aurum Potabile*; for it is given to restore weak and languid People; by its Cordial Virtue it does good in Malignant Fevers and the Plague; it repells Syncope, Passions of the Brain, Apoplexies, Epilepsies, Palsies, Vertigo's, Hysterick, and Hypochondriack Passions; it is given in Broths, Yolks of Eggs, or proper Waters, from half a Dram to a Dram.

*Our*

*Our Essence of Emeralds.*

Take of the fragments of Emeralds rubb'd very fine one part, of Nitre and Sulphur three parts, Calcine this in an Earthen Vessel, that indures the Fire; dulcifie it with luke-warm Water, as above; and afterwards calcine it twice, adding always new Nitre and Sulphur; after the third Calcination and Dulcification, put the Powder in a luted Crucible in a Potter's Furnace, or a Reverberating Fire for six Days: then put it in a Glass-Vessel, and pour upon it rectified Spirit of Salt, to the eminency of four Fingers, and digest it in a hot Bath for 20 Days; then pour it off into another Vessel, and pouring new Spirit of Salt to the Feces, digest it as before, till all the Powder is dissolved: Then pour all the Spirit in a close shut Vessel, and digest it a Month; after which distill it softly, and the Tincture will remain at the bottom. The Virtue of it is much increased by adding Alkalized Spirit of Wine to it, digesting it, and afterwards separating the Spirit: In the same manner you may prepare the Essences of Carbuncles, Hyacinths, and other precious Stones.

I need say but little of this, for it is a most potent Cordial against Poison, Malignant, and Pestilent Fevers, and proper in all Distempers of the Brain, as Madness, Apoplexy, and the like.

*Our Essence of Arsenick.*

A perfect Chymist should be able to extract Poison out of useful and costly things, and to convert Poisons themselves to perfect Antidotes and true Cordials; this is done with Arsenick, from which, tho' it is a Mortal Poison, we draw an Essence, that is admirably Cordial.

Take of Arsenick one part, rectified Nitre three parts, put them in an Earthen Vessel not glazed, but resisting the Fire, and do as is usual with Saffron of Antimony;

timony; when it is Calcined fetch the Nitre out with luke-warm Water, dry it, and add new Nitre as before; after washing dry it again; and adding two parts of Nitre, and two of Sulphur set it on Fire a fresh, and dulcifie it; but take care of the Flame and Steam: After the third Calcination and Dulcification, set the Powder in a well luted Crucible in a Furnace, or Reverberating Fire for a Month; then proceed with the Spirit of Salt, as is said of the other Essences; digesting, and cohobating it several times; all being dissolved, separate the Spirit; and afterwards with Spirit of Wine, &c. as in the other Essences.

This Essence subdues all Poison, and in Virtues imitates the *Aurum Potabile*, Pearls, Corals, and other precious Stones, it clears impure Bodies of all bad Corruption in the Veins. It is the best Remedy against Malignant Ulcers, Gangrenes, or any Corrosions whatever, it takes off Morpew, and Tettors by Unction; it is given in Broth or Waters from a Scruple to a Dram.

#### Our Essence of Common Salt.

Take Salt well dried, dissolve it in seven times distill'd Rain-Water; let the Moisture exhale, and with Bole-Armoniack, draw from the Salt a Spirit according to Art; cohobate it four times with the same Caput Mortuum, and rectified of Impurities set it by: then break the Retort, and make Salt of the Caput Mortuum, according to Art, filtrating it well; and it will be red, then put it to the above-mention'd Spirit in a Glass well luted with Mastick and the White of an Egg, and digest it in a Bath; a Month after rectifie it again twice or three times; then adding Alcalized Spirit of Wine digest it again; afterwards draw off the Spirit of Wine, and the Essence of Salt will remain.

This preserves dead Carcasses, as well, as live Bodies from Corruption; in Wounds it is of greater Efficacy than Balsams; it strangely cures Ulcers, it dissolves Gravel, and the Stone in the Bladder, it clears the Veins



Veins of gross Qualities, and Gravel, and cures Distempers, that proceed from the Blood; it Consolidates and heals the Ulcers of the Bladder and Kidnies; it does good in Obstructions of the Liver, and other *Viscera*, and is of great Virtue in putrid Fevers; it removes Infections of the Skin; the Itch, Tettors, Freckles, St. Anthony's-Fire, the Wolf, &c. it Suppurates all hot Tumours whatever, and resolves those, that are cold tho' Scirrhus: It eases the Gour, preserves the Radical Moisture, retards Old Age, sharpens the Understanding: It is given in Liquids from one to two Drams.

#### Our Essence of Sal-prunell.

Mix very clear Sal-prunell with common Salt well dried, and make it in the same manner as the Essence of Salt is made. This differs not in Virtue from that of the common Salt, especially in Fevers.

#### Our Essence of Sulphur.

First make Vitriol red, afterwards add a like quantity of Sulphur; and putting it in new Pots, according to custom, sublimate the Sulphur four times; afterwards put to it dried Salt dissolv'd, and coagulated; which sublimate again four times with the same Flowers, and these Flowers will be White and Volatile, which set aside. Then take Spirit of Sulphur rectified by the Bell; and drawing it a fresh off of Filings of Steel, take away the Acrimony so, that it is as sweet as Water; in this dulcified Spirit, put your Flowers, and let the Spirit stand above them four Fingers breadth; then in a Glass Vessel well stop'd digest it in a Bath, and the Spirit will assume a red Colour; pour off the Spirit, add new till it colours it no more; then separate the Spirit by Distillation, and the Tincture remains at the bottom; to which adding Alkalized Spirit of Wine, digest them till they become one. Then separate it by Distillation, and the Essence will remain at bottom.

It is very Cordial, and nothing is more proper in Cramps of Wounds, even tho' the Nerves be cut off; pricking of the Nerves, or Venemous bites of any Animals whatever; it kills the Venom, and cures the Wounds. It is the true Balsam for Distempers, and Ulcers of the Lungs: It helps Hectick, Phthifical, and Asthmatick People; it preserves the Radical Moisture, takes away Arthritick Pains, comforts the Nerves and consumes the old or new Impurities of Catarrhes; it restores hearing to the Deaf, and is good in fordid Ulcers. It is given from half a Dram to a Dram in Broth and proper Waters, and externally it is applied by it self, or mix'd with Ointments.

*Our Essence of Vitriol.*

The Philosopher's assert, that Vitriol is the Blood of the World, and will have it, that the Philosopher's Stone is made of it; after which so many seek in vain: They affirm, that in this the true power of the universal Remedy consists: It is true that, as Chymistry draws wonderful Remedies out of all Parts of Minerals, and half Minerals; the same may likewise extract Medicines of strange effect out of Vitriol; which appears by this, that only calcined in the Sun it stops all Hemorrhagies: many use it likewise at a distance, applying it to the Blood, to preserve the Part from Corruption; which is an argument that it must be of greater Efficacy when it is wisely managed, clear'd of its Impurities, and digested to perfection.

*Take Calcined Vitriol, having extracted the Spirit according to Art, rectifie it; dissolve the remaining Fæces with hot Water, then filtre, and dry it; do this often that you may collect a quantity of Salt, and of Spirit as has been said before; then put the thrice rectified Spirit to the Salt, and cohobate it seven times; yet always dissolve the Caput Mortuum, and fix it as before. Then put the Salt in a Vessel, that endures the Fire in a Reverberating Fire for seven Days, till it grows red; then again with its well rectified Spirit, put it in a Glass well stopp'd, and digest*

gest it in a hot Bath; after 40 Days distill and rectifie the Spirit seven times, and dissolve the Salt with Rectified and Alkalized Spirit of Wine, and fix it: Then put the Spirit to it again, and digest it till it looks red, afterwards draw off the Spirit, and at the bottom you will find the Tincture; which with new Alkalized Spirit of Wine digest again: The Spirit being drawn off, the Essence remains.

Nothing has produced a finer Medicine against all Distempers than this, it expells all manner of Poison, whether Vegetable, Animal or Mineral; it revives the Vital, Natural and Animal Spirits; this a Secret hid from so many, so admirable, so universal, that it is good for all Distempers of both Sexes in all Ages; it exceeds the *Aurum Potabile*, all Panacea's, or any other Remedy; it is given from a Scruple to a Dram in Broth, the Yolks of Eggs, or other Liquids.

*Antepilectick Troches.*

Most People speaking of Mineral Cinnabar, think that it is produced in the Bowels of the Earth; but they are much mistaken; for the Cinnabar, which is call'd Mineral, is, not to call it Antimony, the Preparation we treat of. The Cinnabar for the Epilepsie spoke of by many Authors call'd Mineral, and Artificial, is made in this manner.

Take the *Caput Mortuum*, that is left of the Butter of Antimony, add to it the same quantity of *Mercurius Sublimatus*; the Glass being well stop'd distill it according to Art; toward the end increase your Fire very much, and the Antimony shall ascend to the Neck of the Glass in the form of very fine Cinnabar, which shall be Mineral. This is wash'd till it is dulcified, then put it in a Crucible and an open Fire for three Hours, and burn Spirit of Wine upon it three or four times: Of this take an Ounce; of the Magistery of Pearls, and Coral each a Dram and a half; *Ambergreece*, *Saffron*, each a Scruple; of *Elks-hoof* a Dram, *Man's Skull* prepared without Fire

Five three Drams; the Fæculæ of Peony, half an Ounce; of distill'd Oil of Amber, of the Mucilage of Harts-horn, and Mans-Skull a sufficient quantity to make Troches; to be given from a Scruple to a Dram in the Epilepsie, and you will see wonders: For this Secret has been confirm'd by many Experiments.

### Our Caput Mortuum Magistrale.

Take the Caput Mortuum of Aqua Fortis, that is made of rectified Nitre, and well calcined Vitriol, and with warm distill'd Rain-Water make a Lye, and draw out the Salt according to Art: Afterwards the same Salt being twice more dissolved in the said still'd Water, till the Crystals appear; Take of rectified Nitre one part, and two of the said Salt, the Nitre being liquify'd in a Crucible with a Fire of the second degree, add the Salt by little at a time, and let all stand thus liquify'd three Hours; put this Mass to the Aquafortis drawn from the above-mention'd Caput Mortuum; and to every Pound of it put three Ounces of the Flowers of Antimony; Leaf-Gold three Drams; of Coral, Pearl, Eggs-shells, each two Drams; let it digest four Days: Then distill it till it is dry, and pound the Mass that remains; imbibe it again with Spirit of Wine, let it stand eight Days, and Distill it again, till it is dry; keep the Caput Mortuum, that remains carefully in well stop'd Vials; of which if you give from twelve to sixteen drops, you'll conquer the Hypochondriack, and there is no greater Remedy against that Distemper, it expells all manner of Obstructions, and vicious Fevers; it is good in Cachexies, cures the Dropsie, and the like.

### Our Cathartick Aureatum.

Take of our Aureatum half an Ounce; of Spirit of Sulphur well rectify'd three Ounces; digest them in a warm place, after fifteen Days distill them in Sand; then cohobate the same Spirit with the same Aureatum nine times; then wash the Powder very well

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with



with Cordial Waters, and dry it: The Dose is from four to ten Grains, giving it always with the Magisteries of Mechoacanna, Jalap, Scammony, or their Extracts, according as they shall be proper.

#### Antivenereal Pills.

Take of our Calomel, the Magistery of Lapis Lazuli, Extract of Rhubarb, Senna, Turbith, Buckthorn, each two Drams; of Gummi Guajacum the weight of all; of the Magistery of Tartar Solutive, Oil of Cinnamon each a Dram and a half; of Syrup of Fumitory a sufficient quantity to make Pills: These will successfully eradicate the Venereal Humour, even out of the infected Bones. The Dose is from half a Dram to a Dram, for 20, 30, or 40 Days:

#### Our Calomel.

Take of good Mercury, and, well mix'd with a double quantity of Sand, put it in a Retort; put under it Fire by degrees, and draw it off in the Receiver without luting the Vessels, that the impure Parts of the Mercury may remain in the Sand; sublimate it afterwards, with common Salt dried, according to Art; and, throwing away the Faeces, put the Salt again to this purely sublimated Mercury, and sublimate it again; after that throwing away what remains, sublimate the purer part with new Salt; do this seven times, and the Faeces being put aside again, put the Retort with the seven times sublimated Mercury in a Reverberating Furnace, and there leave it two Hours, making a violent Fire; afterwards wash it often with Cordial Waters, and imbibe it with Juniper-Water, which should stand a Finger's breadth above it; then burn the same Water, and this do three times.

#### A Cathartick of Antimony with Vitriol, call'd our Catholicon.

Take of shining Antimony that looks like Gold one part, of Vitriol made red two parts; powder'd and mix'd

mix'd let them melt together in a Crucible; then pound the Mass, and put it again in a Retort well luted with distill'd Vinegar, four Fingers breadth above it, and with its Receiver digest it 24 Hours in a moderate Heat; then augment the Fire by degrees, and at last make it violent, that all the Spirit may come out, evaporate it with a moderate Fire, till the Fat Tincture only remains. Then take of Extract of Rheubarb, Senna, Jalap, Turbith, Black-Hellebore each a Dram; of the Extract of Aloes one Ounce, of the Essence of Juniper, and of Limon-peel each two Drams; and adding half an Ounce of the above-mention'd Tincture, digest them all together in a moderate heat; afterwards make it of the Consistence of an Extract, and you shall have a very fine Cathartick against all kind of Fevers, of wonderful effect, as well in Acute, as Intermittent, that excells all Panchymagoga of others: The Dose is from 8 to 15 Grains, according to the strength of the Patient.

Our Antihectick Powder.

Take the Fæces of the Vulgar Regulus of Antimony; lay them in a moist place upon a Marble-Stone, cover it so that only the Air and no Rain may come to it, there let it be dissolved to Oil; exhale this with a slow Heat, and you shall have a most pungent Salt; of which take an Ounce, of Mercurius Sublimatus the same quantity; of the Flower of Barley, and Lentils each two Ounces; of Gum-Tragacanth two Drams; wet them with Rose-Water, and make Troches; that cure all Carbuncles, and corrode Proud Flesh wonderfully.

Our Antihectick Powder.

Take of the Regulus Stellarus of Mars, and English-Tin, each one part; Powder, and mix them with three parts of rectify'd Nitre, and Calcine them according to Art; then with hot Water remove all the Saltiness, and put the white Powder again in a reverberating Fire for three Days, or in a Glass-House,

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or Potter's Furnace; then imbibe it again with rectified Spirit of Wine, which set a-Fire, do this three times. Then take of it one Ounce, of Powder of Vipers half an Ounce, dry powder'd Sage an Ounce and a half; afterwards put live Frogs in a Pot, which shut till they are Dead; then let them dry in an Oven, till they may be powder'd; of these mix three Ounces to the above-mention'd Ingredients: This Compound give from a Dram to two Drams for 40 Days.

## Our Aqua-Vitæ against Arthritick Pains.

Take of Ground Pine four handfulls; Cypress-Leaves, Sage, Rosemary, Wolves-Claw, Nettles each one handfull; of the Bark of Elm, and Leaves of the same, of the Bark of Ivy each two Ounces; of Dwarf-Elder two handfulls; all these being bruised, infuse in 20 Pints of generous Wine; then Still them, and draw off a fourth part; to what is drawn off put half of the above-mention'd Dose of fresh Herbs, with two pound of Worms, first well wash'd in Wine, and three pound of Dogs-grease; and then distill it again, drawing off half; to which put again a third part of the above-mention'd Ingredients; viz. the Herbs, Worms and Grease, and distilling it again draw off the third part; this will be a perfect Aqua Vitæ excellent to comfort and resolve in all articular Distempers and Gouts.

## Our Anodine or Narcotick of Vitriol.

Take of Roman Vitriol, and Tartar each a pound; of Filings of Steel half a pound; put the Vitriol, and Tartar pounded in a Glass Cucurbit well mix'd together; then imbibe them with distill'd Vinegar two Inches above them, and digest them for three Days; then thicken them with a moderate Fire, and imbibe them with distill'd Vinegar as before, and follow the same order after you have thicken'd or congealed it again; add distill'd Vinegar to the Eminency of six Fingers, and with a slow heat it will suddenly turn red; then pour again new Vinegar to it,

it, as long as it draws a Colour out of it; afterwards to the Vinegar put Oil of Tatar per deliquium; and this way all the Sulphur will descend to the bottom of the Glass; then dry it well and put it in three Pints of rectified Spirit of Wine; afterwards set the Vessel well stoped with Mastick and White of Eggs in hot Horse-dung, which change every four Days; after 40 Days distill it, and keep the Tincture left at the bottom of the Glass for use.

This is a true Narcotick, very Efficacious in chasing all Acute, Ardent, and Malignant Fevers, especially in Deliriums; it is also more safely given in all Hysterick Passions, Cholick, and Nephritick Pains, and all Distempers, in which Laudanum and Nepente are used. The Dose is from five Drops to twelve.

#### Our Aureatum.

Take of Leaf-Gold one Ounce, Crude Antimony four Ounces; mix and melt them together in a Crucible, but with an equal heat not fluctuating, that by too much Fire the Regulus may not be separated; after it is melted, let it grow cold, and rub it very small, and afterwards with a little Fire Calcine it slowly in the same manner as you do to Calcine Glass, stirring it all the while with a piece of Iron, and then it will be Calcined, when the Gold with the Antimony looks white, and when hot Coals being laid upon it, it vents no Smoak; afterwards the Glass is made by putting the Calx in a Crucible, in a great Fire for melting an Hour; and then it is perfect, when it appears vitrified, pellucid, and of a flaming colour.

This Process is something difficult, and sometimes deceives the Artift; I shall set forth a clearer Method of preparing this Secret in another Work, which I shall publish; for that will be chiefly for young Beginners. As this Preparation is richer of Gold, than that, of which Crollius, Schroderus, Sennertus, and others write, so it is likewise more Cordial: This *Aureatum* is a Vomitive, and Solutive Medicine; among all Vomits it



claims the first place; for the Gold defends the Heart and Viscera; it not only equals but exceeds the Chymical Calx: The Dose is from two Grains to five.

*Our Catholick Water.*

Take of the Juice of Briony, Bucksthorn, Celandine, Wild-Roses, Elder-Bark, Dwarf-Elder, Germander, of each two Ounces; of rectified Spirit of Wine two Pints; digest it two Days; then Still it off, and to the distill'd Water add of Extract of Rheubarb, of Agarick, Senna, each half an Ounce; of the Magistery of Mechoacanna three Drams, of the Magistery of Tartar Solutive two Drams, of Cinnamon, Mastick, Ginger, Aniseed, each half a Dram; of Antimonial Spirit of Vitriol six Drams; digest them in Horse-Dung; after 24 Days strain it, and keep it in a Vessel well stop'd.

This is call'd Catholick Water, because it really works without nauseating, and is of great use in all Distempers, where Purging is required; it is taken either in Broth, Wine, or Water; the Dose is from one, to three or four Drams at most.

*Our first Alexipharmack-Troches.*

Take of Oriental Bezoar prepared, Harts-Horn, Fovial Bezoartick, Bezoartick Mineral, of the true Unicorn Rhinoceros's-Horn, each two Drams; of Samian-Earth, Bole-Armoniack, Seal-Earth, each half an Ounce; of Contrayerva, five Drams; of Pompholyx, the Fragments of all pretious Stones, each half a Dram; the Magistery of Pearl, all the Corals, and Boars-Teeth, each a Dram; 20 Leaves of Gold: powder them all, and with the Mucilage of Harts-Horn make Troches.

They free the Patients from all Poisons, Malignant, and Erratick Fevers; they are wonderful in immoderate Fluxes of the Menstrua, Spitting and Vomiting of Blood, Pleurifies, Pains in the Stomach, and especially for

for Pregnant Women afraid of Miscarrying : The Dose is from half a Scruple to a Scruple with Specificks.

*The second Alexipharmack-Troches with Vipers.*

Take of Swallow-wort, *Scorzonera*, *Contrayerva*, Limon-Peel each a Dram; Powder of Vipers half a Dram; the Right Unicorn, Lapis-Bezoar, Rhinoceros-Horn, of the Bone of a Stags-Heart, each half a Dram; Jovial-Bezoartick, red Crystals prepared, each a Dram; Powder them, and with Mucilage of Harts-Horn make Troches; that expel Poison, Cure Malignant Fevers, Small-Pox, Measles and the like.

*Our third Alexipharmack-Troches.*

Take of the Roots of Tormentill, *Angelica*, White-Thistle, Swallow-wort, Gentian, *Contrayerva*, *Scorzonera* each a Dram; Bayberries, and Juniper-Berries each an Ounce; Ivy half an Ounce; Cinnamon, Yellow Sanders, the Wood of Aloes, ach two Scruples; of the Bone of a Stags-Heart half an Ounce; pound them, and in a Glass-Vessel sprinkle them with three Drams of the Essence of Venice-Treacle; add of red prepared Crystals, Emeralds prepared, Oriental Bezoar, Magistery of Pearl, Right Unicorn each a Scruple; Magistery of Amber, Salt of Tin, Leaf-Gold each 25 Grains; of the Mucilage of Harts-Horn, and Tragacanth, made in Orange-Flower-Water, a sufficient quantity to make Troches.

This expells the Plague, Pestilent Distempers, and Malignant Fevers: It is good in all Faintings and very Efficacious against Arsenick, and the like Poisons; the Dose is from a Scruple to half a Dram.

*Our Balsam of Life, or Cordial Balsam.*

Take of the Universal Panacea, the Essence of Gold, and of Silver each two Drams; of the Essence of Ambergrease 25 Grains; of the Essence of Pearl three Drams; of the Tincture of Vipers half an Ounce;

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Ounce ; Essence of Stags-Blood one Dram ; mix them, and add of true Oriental Balsam four Grains ; and it is an excellent Cordial to comfort Nature : The Dose is from half a Dram to a Dram.

## Our Balsam of Health.

Take of Essence of Ambergrease made with Spirit of Roses, of the quintessence of Roses, of the Essence of Juniper-Berries, and Citron-Peel, each one Scruple ; of the Oil of Orange-Flowers half a Scruple ; mix and give it in Simple Sugar of Roses : From two Grains to six.

## Our Bezoartick Mineral.

Our Bezoartick Mineral differs little from the Vulgar, which the Chymists prepare, tho' it is more correct and safe, by reason of the Antimony and Mercury, that by the Fire are purg'd of all vitious Qualities.

Take of the Vulgar Regulus of Antimony, but of that which has been in a most violent Fire, after it is purified 16 Hours, and of Mercurius Sublimatus, that which our Calomel is made of, and distill them through an Alembick according to Art ; extracting the Butter as in the Bezoartick Mineral described of other Authors. Dulcify it, by washing it often with warm Water ; and dry it with a moderate Heat ; dry'd, imbibe it with Spirit of Nitre, at the eminency of four Inches, and distill it ; then cobobate it three times, and dulcifie it again as before ; dulcified put it in a earthen Pot, that resists the Fire, and keep Fire about it for three Days ; for this is the true preparation : Afterwards imbibe it with Spirit of Wine, which set a-Fire upon it five times, and then you shall be sure to have the best, and most perfect Bezoartick.

This is that of my Master, and if you mind it, there is not that assiduity in the Operation of others ; he used it himself in all Broths, a Scruple at a time ; as appears

appears by his and my Observations; and because it is corrected, and digested so, as never to do any hurt, he gave it to all Patients, not only in Malignant, Acute, and Pestilent Fevers; but also in Cachexies, Measles, Small-Pox, and other Distempers: The Dose is from half a Scruple to a Scruple.

*Our Jovial Bezoartick,*

It is made the same way as that above-mentioned, nothing being left out; but it only differs in the Composition: For the Regulus Stellatus of Mars is made first, and by Fire is joined to the most pure Tin, and the above-mentioned Mercurius Sublimatus of Calomel, for the rest follow the same order, as in the Bezoartick Mineral; for so is that, which my said Master made famous by using it, that which he gave, and I give in all desperate Diseases, from half a Scruple to half a Dram.

There are other Bezoarticks made Solar, by adding Gold, and Lunar, by adding Silver, and so of the rest, as they are described by other Authors. But I think it the wisest way, not to stir from the Fire, nor that Method, which I have proposed in the Bezoartick Mineral; for if it be made otherwise, it is not so perfect. The Correction of the Flowers of the Saffron, or the correct Auratum, is made this way.

*Take the Flower of the Saffron, or the Glass, put it in a Retort, and with rectified Spirit of Vitriol, let it digest five Days in a moderate Heat: Distill it till it is dry; then cohobate it six times more, always distilling it till it is dry; this dulcifie with Cordial Waters, and being dried imbibe it with rectified Spirit of Wine, which set on Fire upon it five times: This Method corrects the Antimony very much, and all these Corrections are made after this manner.*



## An APPENDIX.

**T**Hinking that I ought not to pass by so wonderful an Operation of the Bezoarticks, I have made this Appendix, in which I desire the Reader to take the trouble to Read a fine Accident that happen'd at *Venice*. The Honourable *Andreas Donatus*, a worthy Senator of this Serenissime Republick, to whose Civility I am much indebted, order'd me to visit *John Baptista Tola*, who was ill, I went, and found him about 65 Years Old, of an adust Melancholy Temperament, very much given to drinking before; and then taken with a Continual Malignant Fever, which had lasted seven Days; his Pulse was trembling, and low, his Urine thick, his Eyes dark, his Strength very weak; to make short all the Signs being Mortal, I gave him over, and so did another Physician, who had prescribed many proper Remedies, according to Art before: both were of Opinion, that nothing was to be given, but some Cordials, and that his time was very short; this we told his Domesticks; yet I ask'd this learned Physician, if he thought fit to try even the last Remedy; that is, to give the Patient some of the Solar, and Jovial Bezoarticks, for in such Cases they are often given with Success; for they force Nature, to expel that by Sweat, Urine, or Stool, that brings the poor Patient to Death's door. He was of my Opinion, and presently order'd six Grains of the Solar, and six of the Jovial, with other Specificks; and sent for it to a Reverend Father, who was a great and dexterous Chymist. The Patient took it, and voided abundance of black Gall by Stool; but this Irritation made him yet weaker, and his Strength was visibly lessen'd; at which the Family being frighten'd, his Son, a Clergyman, came to me not only in a great Passion, but gave me also to understand, that the other Physician said that his Father's Death was owing to the Bezoartick

Bezoartick Powder; who, tho' he knew, that it could not proceed from thence, moved at the sudden danger, took care to lay the fault on me. The Son, I say, with Threats upbrading me with this piece of Villainy, accused me of his Father's Death; when at last by God's Goodness this Evacuation set off the black Gall, which Nature was not able to expel, and so recall'd a Dead Man, that I may use this Expression, to a new Life of Health; and ever since when I am in a Consultation, I never differ from the Propositions of others; being sure, that the least ill Success, that happens is attributed to me.

*Our Antipleuritic Extract.*

Take of the Extract of the Flowers of red Poppies two Drams; of Mallows, the Gum that is extracted of Oak each a Dram and a half; of the Membrane Pleura of a Man, or a wild Boar two Drams; of the Filing of Boars-Teeth three Drams, Pike Jaws one Dram and a half; of right Unicorn, Magistery of Coral, the inner Peel of Hasel-Nuts, Box Flowers, Sal-Prunel each a Dram; make a Mass. It is a Composition of wonderful effect in a Pleurisie: The Dose is from a Scruple to half a Dram.

*Our Hysterick Extract.*

Take of Extract of Mugwort, and Motherwort each three Drams; of the Extract of Savin, and Juniper-Berries each a Dram; of the Fæculæ of Briony two Drams; of the Extract of Nip, and Fole-foot each a Dram and a half; Salt of Tin four Scruples; of the Seeds of Sefely, and Bugloss, each three Scruples; of the Seeds of Bishop's-Weed, Rue, Caraway, Anise, Cardamom each two Drams; Castor four Scruples, mix and give it from half a Dram to two Drams: It is of great use in Hysterick Passions.

*Our Nephritick Extract.*

Take of Rupture-wort three handfuls; of Eryngo, Rest-barrow, Great Burr, each one handful; of Bay and Juniper-

*Juniper-Berries, each two Drams; of the Seeds of Gromwel, Nettles, Saxifrage, Anise, Fennel, Onion, each two Drams; of all these make an Extract according to Art; and then add of the Magistery of Judaick-Stone, Mountain Crystal, Crabs-Eyes, Eggs-Shells, the Salt of Bean-Shells, of Flowers of Sal-Armoniack each a Dram: Ferment them together, and it is a great Remedy against Nephritick Pains: The Dose is from a Scruple to half a Dram.*

#### Our Golden Extract.

*Take of Bay and Juniper-Berries, Peach Kernels, each four Ounces; of Flowers of Nuts, Elder, Calamint, Wild-Marjoram, Penny-Royal, each a handful and a half; of the Seeds of Wild-Carrot, Anise, Fennel, Cummin each two Ounces; Cinnamon, Cloves each half an Ounce; of the Wood of Aloes a Dram; make an Extract according to Art; then add of Balsam of Peru, of Oil of Nutmeg, Æthereal Oil of Turpentine each half an Ounce; mix, and let them ferment together: The Dose is from one Dram to two.*

#### Our Golden Diaphoretick:

*This is by many Authors said to be that Sulphur, that is in the Fæces of the Vulgar Regulus, which being powder'd, and boiled with Vinegar, the Sulphur is Precipitated to the bottom; then wash'd often, and dried they use it to mundifie the Blood, and provoke Sweat. But ours is more correct; because besides this, ours is again calcin'd in an open Fire, for 24 Hours, till it grows White, together with a fourth part of the Fulminant Gold: It is digested afterwards with burning Spirit of Wine, which is poured upon it three times; and then it is a very good Diaphoretick in the Pleurisie and Pestilent Fevers; it is given from 16 Grains to 20.*

*Our Common Diaphoretick.*

The Vulgar Regulus is three times Calcined, always with twice the quantiry of rectified Nitre; and then it is dulcified, and Spirit of Wine is burnt upon it: It is given from a Scruple to half a Dram, or may be a Dram, against all Chronick Distempers; in which it works by Sweat, and insensible Transpiration.

*Our fixed Diaphoretick.*

Is the fix'd Powder of *P. Basilus Valentinus*, which he himself calls Universal, and sometimes the fix'd Panacæa of *Basilus*, describ'd in the *Currus Triumphalis Antimonii* of the same Author.

*Our liquid Universal Panacæa with Gold.*

Take of Leaf-Gold an Ounce, and Calcine it with Sulphur in a circulating Fire eight Hours, adding Sulphur to it four times; then wash it with warm Water, and dry'd join it with Oil of Antimony, made after this manner. Take of Regulus of Antimony, and Mercurius Sublimatus each four Ounces, mix them well, and distill them in a Retort; as when the congealed Oil or Butter of Antimony is made, so increase the Fire gradually, till it is turn'd into Butter, laying likewise Coals to the Neck of the Retort. Set this Butter in the Cellar upon a Stone with a Vessel underneath it, in which it may drop, and you shall have an Oil; an Ounce of which put to an Ounce of your Calcin'd Gold; afterwards put your Vessel in a warm place, digesting it for a Month, and it will be of a Gold colour. Then add rectified Spirit of Wine, and set it again in the Heat, where the Spirit of Wine will attract all the Gold; pour it off, and put new Spirit of Wine to it, as long, as it draws a Tincture: Exhale the Oil, and the Powder will remain; this together with eight Ounces of Crude Antimony, and 20 Ounces of Oil of Nitre Per Deliquium, put in a Vessel well stopp'd, to be digested a Month;



Month; afterwards put to it two Pints of rectified Spirit of Wine, and digest it again; and the Spirit will quickly draw out the Tincture as before: Put this Spirit to that of the Gold, and put fresh Spirit upon the Oil of Nitre, as long as it draws a Tincture: For it ought to remain, as it was set at first; then filtre these coloured Spirits; and Still it slowly in Ashes, till four Ounces of the Tincture remain in the bottom of the Retort. And this is our Liquid universal Panacea, that operates by Transpiration, and easily forces the Vital Faculties to perform that, which Nature stands most in need of without Offence. By this I have restored many Hætick, Phthisical, and Dropsical People to Health. It is given from eight to twenty Drops with Specificks; and it works sooner or later, according to the strength of the Patient.

Our Tincture, or true *Oleum Antimonii dulcis*.

Take of clear Hyacinthine Glass of Antimony four Ounces; of Oil of Nitre made per deliquium eight Ounces; mix the powder'd Antimony with the said Oil, and digest it in a well stop'd Glass for a Month, in a moderate and equal Heat, and it will be red; then add rectified Spirit of Wine, as in the above-mentioned Liquid Panacea, till the Oil is robb'd of its Tincture; then take the Spirit, and Tincture, which is left at the bottom. It is an excellent Medicine, and little less than the said Panacea. It is of great use in Wounds, and corrosive Ulcers; the Dose is from eight to ten Drops in Wine, or other Specificks. By this, says Basilus, and others, the Bodies are renewed, and revived: For it Mundifies all the Impurities of the Humours, that pollute the Blood, and is very Cordial: It is of great Efficacy in the Dropsie, Cachexy, Hætick Fevers, Phthisick, and all Infirmities.

Many have writ of it, but it is not so easily made; for if you mind the Preparation, the Menstruum need not to be distilled, for the Spirit of Wine is removed, and serves for other Solutions.

Other

Other Tinctures are made in the same manner, that are all very good, yet these are the best; that likewise, which is extracted out of crude Antimony is wonderful; for the Simple Nitre attracts the Tincture, and the Fire takes nothing from it: This is also call'd a Panacæa; the same of the third degree is likewise extracted out of the Vulgar Regulus, mix'd Metals, the Regulus of Iron, and of Tin, the Crocus Metallorum, the Flowers of Antimony, and out of the Calcinations of the same; and if it be extracted with the said Menstruum, it will be much better, than if it was extracted with distill'd Vinegar, or other Liquors: The Dose is from half a Scruple to a Scruple.

Our Corrosive Oils are our congealed Oil, that is the Butter, which I use to dissolve Gold: And this corrodes all Proud and Superfluous Flesh: The other is a Liquor made of the Fæces of the Vulgar Regulus.

Most People call Essences, what I call by the Name of Tinctures and Extracts; but Essences I call Preparations, that are made after this manner.

*Take the Simples out of which you will extract the Essence; Flowers, Barks, Seeds, Roots, &c. steep them in rectified Spirit of Wine for two Days; then Distill them till they are dry; then put the same Herbs or Flowers again to the distill'd Spirit; digest them in a well stop'd Vessel, and distill them again; do this twice more; then Circulate it, and you shall have a Vegetable Essence, of what you have used: I commonly make use of Wormwood, Mint, Rosemary, Sage, Spike, Marigolds, Lillies of the Valley, Flowers of Lime-Tree, Peony, of Oak, Angelica, White-Thistle, Swallow-wort, Celandine, Eye-bright, Bistort, Tormentill, Contrayerve, Bay and Juniper-Berries, the Seeds of Anise, Fennel, Cummin, Parsnips, Wild-Carrot, Cardamom, Galingal, &c.*

#### Quintessences.

These are made another way; for the Simples first ferment, and then by Distillation the Oil is separated, which is the true Quintessence. Liquid Tinctures are extracted

extracted with Spirit of Wine, exhaling its part. Some are extracted from distill'd Waters by the help of Acid Liquors; those are extracted out of Minerals, and half Minerals with their proper Menstrua; in our *Manipulabrium* these things will be made plain.

### *Elixir.*

Since Elixirs are named in our Observations, it is therefore necessary to explain some of them. I have always made the *Elixir Proprietatis* according to *Crollius*, and I can speak well of it. With him I add to it the Essences of Wormwood and Mint; as for Example, two Ounces of Elixir, of the Essences of Wormwood, and Mint, each an Ounce; digest them together, and use this, for it is a great Stomachick. I likewise add to it the Essences of Celandine, Wild-Radish, Cresses, Mustard, Snails, equal quantities, and digest it a Month; of which I give from a Scruple to half a Dram, in all Distempers of the Black-Gall, the Scurvey, Hypochondriack, &c. with Success.

### *An Elixir against the Scurvey and Hypochondriack.*

Take of *Elixir Proprietatis* two Pints, of the Essence of Amber two Ounces; of the Essences of the Bark of Roots of Caper, the Bark of Tamarisk, of Bark of Ash, each half an Ounce; of the Roots of White-Dittany, Rhaponticum, Oke-Fern, Scorzonera, Fern, Water-Flag, each two Drams; Water-Cresses, Wall-Pepper, Germander, Everlasting, Liverwort, Fumitory, the Flowers of Broom, Centory, Ceterach, Hearts-Tongue, Agrimony, St. John's-wort, each two handfuls; of the Seeds of Broom, Hogs-Fennel, each half an Ounce; of the Wood of Guajacum rasp'd, of the Bark of the same each four Ounces; Sassa-paril an Ounce and a half; Sassafras four Ounces; Salt of Tartar half an Ounce: All being pounded and cut, infuse them in rectified Spirit of Wine, as much as will soak them well, and stand above them two Inches; digest this for eight Days, then distill it; and, to what is Still'd off, renew the same Composition as before;

fore ; it is admirable in Hypochondriacks, and those that have Cold Swellings: The Dose is from a Scruple to a Dram and a half in proper Vehicles.

A Nephritick Elixir.

Take of Nephritick Wood two Ounces and a half ; Camomil, Melilot, Ground-Ivy, Golden-Rod, Betony, St. John's-wort, with the Seeds, and Flowers of Rupture-Wort, each three handfuls ; Restharrow, Burnet, Saxifrage, Wild-Radish, the Seeds of Sweet-Briar, Gromwell, each two Ounces ; the Berries of Juniper, and Ivy each an Ounce and a half. All being siced small, infuse them in a well stopp'd Vessel in terebinthinated Spirit of Wine, at the eminency of four Inches ; digest it eight Days, then still it off ; infuse again the same Ingredients, and do as before : The Dose is from a Scruple to half a Dram, and it is excellent against the Stone and Gravel.

An Uterine Elixir.

Take of Rupture-Wort, Mug-Wort, Mother-Wort, Penny-Royal, Calamint, each a handful ; Bark of Ash, and Savin, each three Drams ; of Citron, and Orange-Peel, each half a Dram ; the Roots of Swallow-Wort, Birth-Wort, Peony, Madder, Briony, Orris, White-Dittany, Zedoary, of the Seeds of Anise, and Cardamom, each half an Ounce ; of Basil two Drams ; Bay-Berries half an Ounce ; Ginger, Cinnamon, Nutmeg, Saffron, each an Ounce ; all being pounded and cut, digest them with three Pints of Alchalyzed Spirit of Wine, in a well stopp'd Glasse-Vessel in a warm place, as Horse-Dung, or a Bath of hot Water 24 Days ; afterwards distill them in hot Water ; and then add to the Fæces a Pint of Spirit of Wine, and digest it again in a hot place ; after eight Days pour off the coloured Spirit, and with a very small Fire evaporate the Tincture, till it is of a Mucilaginous Consistence ; add this to what was drawn off first ; burn the Fæces, and with Water of Mugwort extract the Salt, which add to the Elixir, together with an Ounce of the Tincture of Tin ; it is of wonderful Operation



in all Uterine Distempers, or such as proceed from them: The Dose is from half a Dram to a Dram in a proper Liquor, and may be given for many Days, according as the Distemper shall require.

### Our Antiepileptick Extract.

Take of the Extract of Man's Skull made according to Art, half an Ounce; of the Extract of Box, the Roots and Seeds of Peony, Oak, the Flowers of Lillies of the Valley, Lime-Blossoms, each two Drams; the Mucilage of Harts-Horn, of the first Year, three Drams; of Bezoar-Stone, Unicorn, Elk-Hoof, each a Dram; the Extract of Swallows, and Magpies before they are Fledg'd, Peacocks-Dung, each a Dram and a half; the Narcotick of Vitriol, Salt of Silver, Amber each two Drams; of the Magistery of Pearl, Coral, and Sapphirs each half a Dram; of the fix'd Diaphoretick of Antimony half an Ounce; of our Universal Tincture of Antimony with Gold three Drams; mix and make a Compound; of which either in Pills, or a proper Liquor, give from half a Scruple to half a Dram, for fifteen Days in the Morning, and the Wane of the Moon.

By this many Epilepticks have been cured, tho' I have given it to some for Months together; to some more and some less. But if it be laborious and costly, it is very Efficacious; it is also of great use in Head-achs, Palsies, Apoplexies, and Capital Distempers, proceeding from a cold Temperament.

### Our Aggregative Tincture.

Take of the Roots of Angelica, White-Thistle, White-Dittany, Bistort, Tormentill, each three Drams; Swallowort, Gentian,, Rhabarbaricum, Scorzonera, Water-flag, each half an Ounce; of the Leaves of Wormwood, Southernwood, Ground-Pine, each half a handful; of the Leaves of Scordium, Calamint, each one handful; of the Flowers of Rosemary, the lesser Centory, Clary, Oranges each a Pugil; of Cinnamon, Nutmeg, Cloves, each

each a Dram; Myrrbe, Mastick, Aloes, Succorina, each two Drams; Castor, Mummy from beyond Sea, each two Scruples; of Red-Coral prepared, Harts-Horn, Mother of Pearl prepared, each a Dram and a half; Saffron a Scruple; of Benzoin, Spikenard each one Dram; of Citron, and Orange-Peel each an Ounce and a half; of all the Sanders each half an Ounce: Bruise all and infuse it in a well stop'd Glass-Vessel, in Nine Pints of Alkalized Spirit of Wine; let it stand in digestion for 15 Days; then pour off the Tincture, and add to it the Salt of the Fæces, they being burnt according to Art. This Tincture has great Virtues; like the Elixir Vitæ, it recreates the Vital Spirits, and expells from them all Steams of Poison; it is given in Malignant Distempers, in time of the Plague, and against all Poisons from a Scruple to a Dram.

### Our Great Elixir Vitæ.

Take of the Juice of Balm Nine Pints, of generous Wine four Pints; of raw Harts-Horn in fragments three pound; of Unicornu, of Bole-Armoniack, each half a Pound; skin'd Vipers without Heads, Tails, or Entrails, No 3. still them in a well tinn'd Tamburlan, that has a large Refrigeratory; put the Fragments of the Harts-Horn, and the Unicorn in the Neck of the Tamburlan, that they may not receive all the Steam. After it is still'd add to the distill'd Liquor new Juices and Wine, and always fresh Harts-Horn, and three Vipers as before; do this Nine times; that is putting every time new Juice, and new Wine to the last distill'd Liquor, changing the Vessel according to the quantity of the Liquor; the last time you must add to it all the Ingredients of the above-mentioned Aggregative Tincture; and let it stand in digestion in Horse-Dung, or hot Water for a Month in large Glass-Vessels well stop'd; then distill it, till it is dry, extracting the Salt not only out of the Fæces, but likewise out of the Fragments of Bones, and Earths according to Art, which being mix'd with the distill'd Liquor circulate for two Months.

This Elixir, tho' the Preparation is difficult, is yet of no great cost. But among so many, as I have used, I never met with one more Efficacious; for it operates more cordially, than that of the Great Duke of Tuscany: It may be given in all Distempers, in which the Heart, and Viscera stand in need of help; to resist Poisons, Putrefactions, &c. The Dose is from half a Dram to two Drams; it has not the smell of Brandy, but a very strong, and sweet scent.

*Our Tincture of Vipers.*

*Take twenty skin'd Vipers, steep them in Spirit of Salt, then add of White Dittany of Crete, Tormentil, Bistort, Swallowort, Scorzonera each one Ounce; of White generous Wine a sufficient quantity to stand two Inches above the Ingredients; let them digest in Horse-Dung, or hot Water eight Days; after that boil them in the same Glass-Vessel two Hours in hot Water; then strain and squeeze it; burn the Faces, and draw out the Salt; what remains is purified twice with the White of Eggs, and put again in warm Water for 30 Days, and by that time it will be as red as Blood.*

This is Cordial, and Alexipharmack; it is proper in Hectick Fevers, the Phthifick, Dropfie, Cachexy, Putrid and Malignant Fevers. In time of the Plague, many People use it as a Preservative, for they affirm; that it mundifies the Blood: The Dose is from a Scruple to half a Dram.

*Our Antinephritick Extract.*

*Take of the Bark and the Wood of Fir rasp'd one Pound; of Nephritick Wood half a Pound; the inner Bark of Hasle-Wood six Ounces; of Saxifrage, Pimpernel, Pellitory, Rupture-wort, each a handful; of the Roots of Liquorice, Rest-Harrow, Bur, Lovage, each an Ounce and a half; Ripe Juniper-Berries, Kernels of Peaches, and Cherries, each three Ounces; of the Seeds of Wild Carret, Parsley, Onions, Nettle, Broom, each*

each half an Ounce; squeeze, and bruise all; then take of the Juice of Rupture-Wort, Ground-Ivy, Pellitory, Onion, and Radishes each a Pint; of generous Wine three Pints; and together with the other Simples put all in a large well stoppt Glass-Vessel, in a warm Bath for eight Days; then squeeze it out hard, Clarifie it with White of Eggs, and strain it; then let it exhale in a warm Bath, till it comes to the consistence of a liquid Extract: Then add of the Magistery of Crabs-Eyes, Eggs-Shells, Mother of Pearl, Mountain Crystal, each a Dram and a half; of Salt of Beans, Pellitory, Amber, Volatile of Urine, each a Dram; mix and keep it for Use.

It is a very great Remedy against all manner of Stone or Gravel, and the like; it excels all other things in curing Nephritick Pains. The Dose is from half a Dram either in Pills or proper Liquors.

#### Our Antifebrile.

Take of Jesuits Bark half a pound, of the Barks of Tamarisk, and Ash, each an Ounce; of the Leaves of Germander, Celandine, Burnet, the lesser Wartwort, each half a handful; of the still'd Water of the Juice of Germander, and the Juice of the Buds of Ash, each four Pints; Antimonial Spirit of Vitriol two Drams; the Barks, and Herbs bruised and pounded, infuse them in the aforesaid Water in a well stoppt Glass in warm Water; after 12 Days draw out all the moisture by expression; and of the Feces being dried, and burnt make Salt; of the Liquor make an extract in a Bath according to Art: Then take of the said extract two Ounces, of extract of Rheubarb, Senna, Hedge-Hysop, each half an Ounce; of the Magistery of Mechoacanna, and Jalap each one Dram; of the Salts of the above-named Feces, the lesser Centory, Gentian, vitriolated Wormwood, Vitriol of Mars one Dram; of the Magistery of Shells of small Snails, and Tartar Solutive two Drams: Ferment all this twelve Days. This Antifebrile is given in all kind of Fevers, as well Intermittent as Continual; it stops



*the Fumes of the Fever, and Purges gently ; it is one of the most perfect Remedies, that can be given without ever doing hurt ; the Dose is a Dram and a half.*

Our Antimonial Spirit of Vitriol, that is an Ingredient of the Catholick Water, and the Antifebrile Extract.

*Take of rectified Spirit of Vitriol one Ounce ; of the Hyacinthine Glass of Antimony half an Ounce ; let it digest a Month in a hot place, and the Spirit shall look of a Gold Colour ; then strain and set it by for Use.*

This is the above-mention'd Antimonial Spirit, which with other Purging Medicines, given from 12 to 20 Drops, works gently without Vomiting, and corrects the Heat of those Medicines.

*Our Purging Magistery of Tartar.*

This is described by many; yet Physicians have not the faith in it, which they ought to have ; for they mind not the Composition. It is made this way.

*Take of the Salt of Tartar, made of the Oil of the said Tartar, one part ; of very strong distill'd Vinegar two parts, and mix them together ; after it has fermented with some noise, distill it till it is dry, and then add new Vinegar ; after the Fermentation is over, they are dulcified ; for the Vinegar takes away the saltness from the Salt, and the Salt the Acrimony from the Vinegar ; then distill it again, and do this ten times till the Vinegar resumes its Acrimony ; distilling it always till the Tartar is fix'd ; when it is fix'd the tenth time add to it rectified Spirit of Wine, made of Wine Lees, and it will quickly be of a red colour ; then strain the Tincture, and put new Spirit of Wine to it, till it colours it no longer ; then filtre it, and still it again, till it is dry ; what remains fix'd melts in the Air to an Oily Liquor ; and this is the Solutive Magistery of Tartar.*

It dissolves the gross and viscous Humours, that are in the Veins, and it is a certain, and necessary Remedy in all Chronick and Vicious Fevers. Nay, my Master Riverius at the end of Acute, or obstinate Fevers, to resolve the Relicks, and Ferment of the Humours, always purged his Patients successively after this manner.

Take of the Water of Maiden-Hair, or another that is proper for the Humours, six Ounces; of Senna two Scruples; Cinnamon, Rheubarb, each a Scruple; of Antimonial, or common Spirit of Vitriol three Drops: This he infused over Night, in the Morning he strain'd it, and adding 15, or 20 Drops of the said Magistery he gave it four or five times; some more, some less; according as was required; to some he ordered a larger, to others a lesser Dose: For some he put in Mocha-canna, or Falap instead of Rheubarb; some he gave it every Day, and others every other Day: To some he prescribed an Ounce of Syrup of Roses Solutive; and by this Method the Bodies remain'd not stuff'd up with Obstructions, and the Fevers became not Erratick: I follow the same Rule, and with me many other Physicians my Friends, who have gain'd great applause by it; for I have seen great effects from it.

### Our Febrifugum.

Take of three times sublimated Flowers of Antimony, with Sal-Armoniack, and Pellucide Hyacinthine Glass of Antimony, each half an Ounce; of Aqua Fortis made of Nitre, and Alum four Ounces; in which Precipitate the said Antimony; then take again of Quick-silver drawn from Cinnabar, six Ounces, and Precipitate it with Aqua Fortis made of Nitre, Vitriol, and Alum, till all is Precipitated; then take of Gold of Venise, or Hungarian Shekins one Ounce; and dissolve it in Aqua Regia; then put all the three Menstrua with the Matter in a well luted Retort, and with a gradual Fire still it till 'tis dry; collect the Spirit in a well stoppt Receiver; and, after it is distill'd, pour it back into the Retort, and in the same manner distill it twelve times from the Caput Mortuum; the

last time break the Retort, and wash the Powder with Cordial Waters five times; afterwards being dried put it to two Pints of rectified Spirit of Wine, and in a new well luted Retort, distill it again, cobobating it six times upon the same Mass. Then separate the Spirit of Wine, and put the Mass of the Calx in a strong well luted Crucible in a circulating Fire, for three Hours; then take it off, and burn the Spirit of Wine upon it, which you drew from it before.

This Febrifugum made of three Herculeffes by my Master, the fourth Champion is the destroyer of Quartans; as appears by many Experiments both in his, and my own Observations: The Dose is from Nine Grains to Ten, with Rosin of Scammony, or Scammony prepared with Sulphur, from 12 Grains to 25, according to the Strength of the Patient: Many have search'd after this, but have not managed it rightly, and this is the true Preparation.

*Salts, which I use in Stubborn and Autumnal Fevers, excellent to dissolve Heterogeneous Humours.*

Take of Salts of Gentian, the lesser Centory, Celandine, Wormwood, Carduus Benedictus, Prunell, of Vitriol of Mars, and Flower of Sal-Armoniack each an Ounce, Dissolve the Salts in a sufficient quantity of Water of Agrimony, or the like, and make a Lee: Boil it over a small Fire, till a little Skin comes upon it; then set it by in a cold and moist place; and it will Crystallize: This takes away Obstructions, and Vicious Intermittent Fevers; as Quartans, and such, as proceed from Impurity; the Dose is from a Scruple to half a Dram, and a Dram in Broths, or other proper Vehicles: It is given to some two Hours before the Paroxysms, and the Patient is compos'd to Sweat.

My Master gave likewise a Salt, made of Alum, and Tartar, which he praised much, yet I never made use of it. *Kiz.*

Take

*Take of Cream of Tartar, and Alum an equal quantity; of distill'd Water of Carduus Benedictus, enough to dissolve them, and over a small Fire reduce them to a form, that in a moist place they may Crystalize: This is given from a Scruple to half a Dram in proper Liquors.*

I likewise give often the Salt of vitriolated Wormwood, or others; as take a Salt, and putting Spirit of Vitriol to it, let it ferment, then evaporate it, and it will be less biting, and more fit to open and cool. There is much writ of Tartar vitriolated, and it is in great request among Physicians.

They join likewise any of these Salts with Steel, and take two parts of the Salt which they will Chalybear, and one of Vitriol of Mars: This they melt in a proper Water, which with a small Fire condense to Salt, which is really Chalybear. In the same manner they are made with Vitriol of Copper, Salt of Silver, Tin and the like,

*Our famous Antiscorbutick Salt.*

*Take of white and sifted Ashes of Ash, Juniper, Box, Guajacum, Water-mint, Germander, Agrimony, Centory, Liver-wort, Ceterach, Harts-Tongue, Fumitory, Water-Cresses, Root of Caper, Tamarisk, Broom, St. John's-wort, Sea-Purslain, Vine-Twigs, equal quantities, with Water of Water-Cresses, make a Salt according to Art. Take of this Salt two Ounces, and add to it two Drams of Vitriol of Mars, of Aluminated Salt of Tartar half a Dram; of thrice sublimated Sal-Armoniack two Drams, 20 leaves of Gold; of Spirit of common Salt a sufficient quantity to imbibe it, and stand half an Inch above it; then dry it over a slow Fire, and make a Mass, which is call'd the Antiscorbutick of Riverius, that in Hypochondriacks, Cachexies, and other Diseases is a Sovereign Remedy; for it expells all the Impurities of the Atrabilious Humours, and mundifies the Veins. The Dose is from half a Dram to a Dram in a proper Liquor.*

*Our*



## Our Extract of Guajacum for the Pox.

This differs from others; for I use the Extract with the Menstruum, which is a Sudorifick.

Take of rasp'd Guajacum, of the Bark of the same, Sassa-Parill, Cinnamon, each four Ounces; Sassafras two Ounces; generous Wine twelve Pints, let it digest in a well stop'd Vessel; after two Days distill it, and draw off two Pints of Spirits; which set by, evaporate half of the rest of the Wine in a Bath, then strain and filtre it well, and in a Bath evaporate it again; till it is of the Consistence of Honey, or rather harder; to every Ounce of this Extract, put two Drams of Diaphoretick Antimony, and half a Dram of Oriental Bezoar, and make Pills; of which give a Scruple or half a Dram every Morning, and after it half an Ounce of the Spirit you drew off first, and let the Patient be well covered, and in 30 Days time more or less he will be freed from the said Distemper, as I have seen of this Composition.

## Our drinkable Turpentine in Gonorrhœa's.

Take of clear Turpentine four Ounces, put it in a Stone Mortar, with two Yolks of Eggs, and mix it with a Wooden Pestle, and it will become Liquid; and adding a Pint of Agrimony Water, stir it till all is dissolved; then in a Glass-Bottle set it in a Bath all Night, strain, or filtre it in the Morning; then add to it one Pound or more of fine Sugar, with as much Juice of Lemon as will make it grateful; give of this an Ounce, or an Ounce and a half in the Morning to those that cannot take Pills.

## Our Water against Gleets.

Take of Guajacum, Lentiscinum, Bark of Ash, each four Ounces; pound and infuse them in eight Pints of generous White-Wine; then add of the Roots of Dittany, Florentine Orris, each three Ounces; of  
dry

dry Mint four handfuls, of Betony a handful and a half, the Seeds of Chastree, Rbue, Lettice each three Ounces; bruise them well, and add of clear Turpentine one Pound, mix and put them in a Glass Cucurbit 24 Hours in a warm place; then distill them in a Bath, and of this give two or three Spoonfuls in the Morning for some Days.

Our Potion against Gonorrhœa's, and Ulcers of the Bladder and Kidnies.

Take of the Roots of Comfrey, Tormentill, Ladies-Mantle, Solomon's-Seal, Blood-wort, Plantain, each an Ounce and a half; of the Seeds of Quinces, Chast-tree Rue, Plantain, Roses each an Ounce; of the Juice of Lemons a Pint; of Dragons Blood, the adstringent Saffron of Mays, each an Ounce; the Water of the Flowers of Malloes three Pints; steep them two Days; afterwards boil it over a slow Fire, and give two Spoonfuls in the Morning fasting four Hours after it.

Of Extracts.

In the Pharmacopœa of my Master many Operations seem to differ from these, but being brought to the Form by him described they became of more Value, than those of *Quercetanus* and others; nor that *Quercetanus*, and so many others have not done very good things; but because it is easie to add to Inventions, he kept a Form different from the rest, as appears by these Secrets by me described, to which are some new Preparations, and the Virtues of all added.

To make Purging Extracts out of Vegetables, according to the Method of my Master, I Extract the Juice out of those Plants, which I have gathered before in their proper Seasons; that I let digest in a Bath, and Clarific it very well; then by distillation I separate the Spirit, and the Remainder I coagulate in the Form of an Extract: Then I cut, and bruise the squeez'd Plant together with a new one not squeez'd; and put them in a large Glass, fit for distillation downward, that is those, that are used, to draw Oils out of Woods; the Vessel

Vessel to receive the Oil being applied, with a Circulating Fire, which always is increased, I drive out all the Humidity, and burn the Fæces to white Ashes, and for fear they should not be calcined enough, I burn them again; of this with the Water or Spirit, which I drew off first, I make a Lee, and by Filtration a Salt according to Art; the Oil extracted by descent, which smells strong of the Fire, I mix with the said Salt, and a little clear Salt of Tartar added to it, then let it digest in a hot place. Then I Distill it always cohobating the Spirit with the Fæces, till the Oil by virtue of the Salt has lost that Fiery scent, then I reduce it to the thickness of Honey, this I add also to the Extract, that was first made, and so I have all the Faculties of the Spirit, Extract, and Salt in one compound; this is the most perfect Form, that can be for Extracts. It is given according to the Strength of what it is made of, according to the Rules of the Dispensary, or rather in lesser quantity, because it is stronger.

In dry Herbs, Roots and other Drugs of little Juice, I draw the Strength out with a proper Menstruum; then every thing being fitted as above, the Oil is expressed by descent; then I make the Salt, which added to the Oil, and several times, as is said, rectified, I put to the Extract. These Extracts are to be kept in well stoppt Glass-Vessels.

After this manner you may make Extracts of all sorts, as well Alexipharmack, as Specifick, tho' they are composed of various Simples; but I shall not launch out so far, as to describe them; he that is expert in an Art wants no Instruction.

It is to be noted, that the Extracts of Vulnerary Herbs; as Birthwort, Comfrey, St. John's-wort, Woodrow, Betony, Sanicle, Ground-Ivy, and the like may not only be given inwardly, but may also be outwardly applied to Wounds in the form of a Liniment or the like; they operate wonderfully, for they comfort, draw together, defend the part from Corruption, and make it Cicatrize the sooner; the Plants likewise, that are call'd Absterfivè, and Exulcerative, thus prepared, are of very good effect.

Of the Chymical Oils of Vegetables, many Volumes treating of Chymistry give various Descriptions; yet this Method I prefer to all others. Let the Plants, of which you would have the Oil, be very dry, and extract the Oil by descent as is said before; then of the Ashes make Salt; which put to the Oil, and afterwards together with some unslack'd Lime, rectifie the Oil; for the Lime takes off that fiery scent, if you Cohobate it often according to Art; then in a Glass Vessel expose it to the Sun, infusing in it the Flowers or Leaves of its proper Vegetable, or some other, if you would have a compound; and it will resume its grateful smell, and according to the Virtue of the Plants receive those degrees of Augmentation, as a hundred are to one. It is used as has been observed by my first Master P. John Faber, as well outwardly, as inwardly.

*Our Chymical Basilicum.*

Take of distill'd Oils of Myrrhe, Mastick, and Frankincense, each half an Ounce; of the same of Turpentine, Bricks, and wax each one Ounce; three Yolks of Eggs, mix it well, and use it; for you'll find it do wonders.

*Our Balsam of Sulphur.*

Take of the Flowers of Sulphur one Ounce; Oil of Turpentine three Ounces; Oil of Violets three Ounces; lee it boil in a Glass Mortar, and agitate it with a Wooden Spatula, till it is very red; remove it from the Fire, and add of the Oils of Wax, and Yolks of Eggs, each half an Ounce; mix, and use it in all Wounds, Contusions, and Punctures of the Nerves:

*Our*



## Our Balsam of Mummy.

Take of the Extracts of round Birth-wort, the lesser Centory, each half an Ounce; of the Extracts of St. John's-wort, and Comfrey, each an Ounce; Venice Turpentine, and white Honey, each four Ounces; of true Mummy three Ounces; of Saffron of Mars four Ounces; mix, and infuse all in a Glass Vessel in six Pints of rectified Spirit of Wine; let it digest a Month, shaking it often, that the Spirit of Wine may the more easily draw out the Tincture; then pour off the Tincture carefully, and still it in a Bath, till the remainder at the bottom of the Glass is of the Consistence of Honey; which is the Balsam, which you may use to heal all Wounds; the distill'd Spirit has also wonderful Virtues.

## Our Apoplectick Balsam.

Take of the Essence or still'd Oils of Spike, Sage, Rosemary, Juniper, each a Dram; of Rue, Marjoram, each half a Dram; Cinnamon, Cloves, each a Scruple; Amber a Dram; the Extract of Benzoin, Storax Calamit, white Oriental Balsam, each two Drams; Balsam of Peru, and Liquid Oriental Balsam, each half an Ounce; Oil of Nutmegs by expression three Drams; Ambergrease, the same black, each a Dram and a half; Musk two Drams: Mix and stir them in a moderate Heat, till they are united: It is a most perfect Remedy in Epilepsies, and Apoplexies, it expels Vertigo's, it keeps out Contagions, Corruption of the Air, it recreates the Heart, and all the Vital, and Animal Faculties: It is used for anointing the Crown of the Head, and Temples, and to smell to.

Our Spirit of Sulphur to Consolidate Ulcers of the Lungs, and to Cure their Corrosions.

*Take of the acid Spirit of Sulphur rectified, put to it by degrees two, or three Pound of Filings of Steel; it will ferment, and become afterwards, as it were, Saline: Then put it in a well luted Retort, distill it according to Art, and extract the Spirit; imbibe this again with the Caput Mortuum, and cohobate it five times, every time taking a new Retort. To the dulcified Spirit of the Magistery of Pearl, Oriental and Benzoin Balsam, each half an Ounce; mix it: It is an admirable Remedy in the above-mention'd Distempers, and to all Phthisical People, of which I have cured many by this Medicine.*

The Magistery of Pearl is made, by first dissolving them in Oil of Sulphur, then washing them well with Cordial Waters, and afterwards exalting them with Spirit of Wine. The Magistery of Benzoin, and Oriental Balsam, are dissolved in Spirit of Wine, and Precipitated with Cordial Waters, and then sublimated in the same manner as Sulphur.

Our Balsam of a Red-Dog.

*Kill a Red-Dog, throw away all his Entrails, but not the Grease; beat his Flesh, Skin and Bones to mash; let them boil in a large glazed Vessel in a sufficient quantity of Oil and Wine, adding to it of the Grease of Bears, Geese, Hens, Taxus, Foxes, Cats, Horses, Asses, each an Ounce; of Earth-Worms wash'd in Wine four Pound; Dwarf-Elder, Ground-Pine, each three handfuls; of Sage, Spike, Rosemary, Wormwood, Southernwood, Cypress Leaves, the Bark of Ivy, and Elm, each one handful: Boil this till the Flesh be consumed; then squeeze it in a Press, and put it in a strong well luted Retort with an Ounce of Gum of Ivy, and two Pound of the above-named Worms, of Ground-Pine six handfuls, and twenty live Frogs; let it digest for three Days in a warm*

warm place; then distill it, and draw off all the Oil, which you shall keep: For it is an Anodine Balsam, Consolidating the Nerves, especially in Distempers of the Joints.

### The Plaister of Sulphur of Rulandus.

Take of our Oil of Brimstone, three Ounces; of Resin, three Drams; of Wax, half an Ounce; of Myrrhe, the weight of all: The Wax, Resin, and Oil being melted together, and mix'd well, strew in the Myrrhe finely powder'd; and let them boil over a slow Fire, stirring it always with a Spatula, till they are very well mix'd; a quarter of an Hour after take it from the Fire, and let it cool by degrees; and you shall have an Excellent, and Infallible Plaister for curing all sorts of Ulcers and Wounds; as the Experiments described in the Centuries of the same Rulandus can witness, in whom you may safely confide; and in his 94th Cure, he says, That in this Plaister is a Divine, Admirable, and quick Power to Soften, Suppurate, Break, Cleanse, and Heal; as he has found by long Experience.

### Our Oil of Toads.

Take four live Toads, that live far from the Waterside, and put them in a Pot well stop'd, to let them be Purged: Then take two Pints of common Oil, in which boil of Sage, Sowthistle, the Roots of Orris, and Gentian, each an Ounce; then drowning in it one of the Toads, lay him near the Fire in an open place, in a glazed open Pot, but take care of the Smoak; when the first is dry; put in another likewise alive, which being dry also, let the third follow, and so the fourth; when the Oil is boil'd, let it be strain'd; and this is a very hot Remedy, of great Efficacy against all cold Pains; against Tetter, Morpew, and Dropsie: It is to be applied warm.

## Our Antiapoplectick Balsam.

Take of rectified Oil of Amber, Oil of Bricks, Rosemary, Sage, Spike, (let them be all distill'd Oils) each half a Dram; Oil of Nutmeg by expression one Ounce; Extract of Castor, Oil of Box, Camphire, each one Dram; Balsams, of Peru, and Occidental, Civet, Extract of Benzoin, each half an Ounce; Musk, Ambergrease, each a Scruple; mix all, and with a moderate heat make a Balsam; it is good for all Distempers of the Head, anointing the back part of the Head, Nostrils, and Pulse with it, is proper against the Apoplexy, Epilepsie, and the like; and anointing the Navel, cures the Cholick Pains, and Hysterick Fits.

## Our Pills against Pestilent Diseases.

Take of wash'd Aloes, Saffron, Myrrhe, each half an Ounce; of Oriental, and Occidental Balsam, each half a Dram; six Bones of Stags-Hearts, Unicorn, Emeralds, Oriental Bezoar; Pearls, and Coral prepared; the Wood of Aloes, each ten Grains: Ambergrease five Grains; of our Tincture of Metals, and Magistery of Tartar, each a sufficient quantity, to make a Mass for Pills; of which give half a Dram, about Bed-time, twice a Week: It clears the Blood, strengthens the Head and Stomach; it eases the Head-ach, comforts all the Spirits, renews Youth, and retards Old Age.

## Our Water to break the Stone.

Take Green Walnuts in the Month of May, and being bruised distill them with three Cobobations, putting fresh Nuts to every Distillation; then extract the Salt out of the remaining Caput Mortuum; and it is of great Efficacy: The Dose is from an Ounce to an Ounce and a half.



## Our Balsam against the Asthma.

Take of Balsam of Sulphur, made with Oil of Turpentine, and of our Oil of Sulphur dulcify'd, each an Ounce; Flower of Benzoin an Ounce and a half; of Oil of Sugar made with Spirit of Wine, two Pints; mix, and make a Balsam: This is very good in all Distempers of the Breast and Lungs; The Dose is from half a Spoonful to a Spoonful.

## Our Pills against all Impurities of the Blood and Humours.

Take of the Extract of black Hellebore, with its fix'd Salt half an Ounce; of our Calomel two Drams; Leaf-Gold half a Dram; of the Magistery of Pearls one Dram; mix, and make a Mass of Pills: The Dose is from one Scruple to half an Ounce; if it be made without Calomel, it may be taken four, or five Months twice a Week; but with the addition of the said Calomel, it will conquer the stubbornness of the Blood in the Pox.

## Our Balsam against Cholick Pains.

Take of the Kernels of Peach-stones four Pound; of Turpentine of Cyprus three Pound; beat, and mix them; then add of Oil of Nutmegs, by expression, three Ounces; of Balsam of Peru an Ounce and a half; of Cloves half an Ounce; mix, and distill it according to Art, and with the same Caput Mortuum Cobobate it three times, then add of rosated Spirit of Vitriol three Drams; of Ambergrease, the Wood of Aloes, each half a Dram; Circulate it Fifteen Days, and it is of wonderful effect in Cholick Pains: The Dose is from half a Scruple to a Scruple in proper Liquors.

Our

Our Ophthalmick Water.

Take of the Juices of Celandine, Eye-bright, and Vervein each half a Pint; the Juice of Cray-Fish eight Ounces; Aloes Succotrina half an Ounce; raw Tuty one Ounce; Crocus Metallorum an Ounce and a half; let it stand in a warm place 24 Hours; then distill it, and to the distill'd Water add of Glass of Antimony three Drams; let it boil an Hour over a small Fire; strain, and keep it for use: It is excellent against Suffusions of the Eyes, Mists, &c.

Our Secret against the bite of a Mad-Dog.

Take of the Liver of a Mad-Dog, made up in the form of a Magistery, and the Magistery of Cray-Fish, each an Ounce; of the Tinctures of Oriental Saffron, Gentian, Castor, Myrrhe, each three Drams; of the Quintessences of Vitriol, of common Salt, Antimony, Silver each half a Dram; of the Leaves of St. John's-wort, Betony, Milfoil, the lesser Centory, Mugwort, Mint, Wormwood, Plantain, Oak-fern, Sage, Vervein, Rue, each one Pugil; of Flower of Paradise, three Pugils; mix and powder the Simplex, and with a sufficient quantity of Gum Tragacanth, dissolved in Water of Scorzonera, and with the aforesaid Liquids make Troches: Give a Dram at a time for 40 Days in a Cordial Water, and you'll see wonders.

Our Tincture against the Bloody-Flux.

Take of the dried Blood of a Hare half a Pound; rectified Spirit of Wine a Pint and a half; let them digest in warm Water, for three Days; then draw off the Tincture according to Art, and reduce it to the Consistence of Honey: The Dose is from half a Scruple to a Scruple in the Milk of Sorrel-Seed.

## Our Balsam of Mastick.

Take of Mastick what quantity you please, steep it in Spirit of Turpentine, let it stand warm; the Body being dissolved separate the Menstruum; and you shall have a Balsam against many Distempers of the Body; externally applied it stops vomiting, and four Drops of it given internally in Broth, or generous Wine do the same.

## Our Secret against the Iliack Passion, and Vomiting.

Take of Æthereal Oil, or the Quintessence of Turpentine, six Ounces; of Balsam of Peru a Dram and a half; of the Balsam of Mastick, six Drams; mix and still it; then Cohobate it three times, and take it in old Mallaga Sack, the Juice of red Vetches, or any other Specifick Liquor, from six Drops to twelve.

The Æthereal Oil alone given in the same Vehicles is proper likewise in the same case.

## Our Tartarized Spirit of Nitre.

Take of rectified Spirit of Nitre one Pound; put it in a Glass Crucible with a wide and open Mouth, and add to it the same quantity of Oil of Tartar, per Deliquium by drops; this will make it froth, drop it in till it raises no more froth; and the Tartarised Nitre will fall to the bottom; then pour it off, and dulcifie it with Rose-Water; it is given in Chronick Distempers, from six Grains to eight in proper Decoctions: The Waters of Cray-Fish, or Pismires; and it is Antifebrile.

## Our Antipleuritick Plaister.

Take of the Flower of Linseed three Ounces ; Onion, and new Soap, each an Ounce and a half ; rub and mix them together ; then with Honey put it in a Frying-Pan over the Fire, stirring it till all is incorporated ; spread this upon a Cloth, and apply it both to the part affected, and that which is opposite to it, and you will see wonderful Effects of it in a Pleurisie.

## Our Plaisters for broken and dislocated Bones.

The Bone being put in its place again, Take of Soot three Ounces ; Frankincense one Ounce ; of Wheat-Flower four Ounces ; of the White of Eggs enough to mix them ; apply it to the affected part, which must be secured according to Art ; and remove it not before the part is come to it self again ; this seems to be somewhat troublesome ; but there is no Remedy like it, and I never saw a better in the like Cases ; afterwards you may apply Cerecloths of Oxy-croceum, &c. as there shall be occasion.

## Our Antipleuritick Oil.

Take in the Month of May of Sallet-Oil four Pound ; in which put of the Membrane Pleura of Man two Pound ; and three Pound of Flowers of Camomil, and white Lillies ; set it in the Sun for two Months ; Then squeeze it in a Press, and weigh the Oil ; Then take a large Gourd of the weight of the Oil, throwing away the Rind and Pulp ; break it in pieces, then boil them till the Oil has drawn all the moisture out of the Gourd ; whose remaining parts are now shrunk up and dry. Then have ready twelve red hot pieces of new Iron, of half a Pound each ; which one by one quench in the Oil, and repeat this twice ; then it will be perfect.



It is an admirable Remedy, if the painful Part in the Pleurisie be twice, or three times a Day anointed with this Oil made luke-warm.

*Our Uterine Powder.*

Take of Rupture-wort one handful; Bay-berries husk'd, the Seeds of Parsnips each an Ounce and a half; of Rus, Chastree, Peony, Grains of Paradise, each half an Ounce; of Water-flag, Wood-Cassia, Mace, Cinnamon, Cloves, each three Drams; the Fæculæ of Brieny, Salt of Tin two Drams; mix and rub it to a very small Powder: It is given from half a Dram to a Dram, in Broths, Wine, Conserves, and the like, against all Distempers of the Womb.

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FINIS.

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